```
Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OM nucleic -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                         Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
   593.4
590.2
5780.2
558.4
555.8
555.8
555.8
547.6
547.6
547.6
547.6
547.6
547.6
547.6
547.6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         seq length: 0
seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   nucleic search, using
                                                                                                                                                                                                                            Query
Match Length DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      IDENTITY NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     February 18, 2005, 18:39:34 ; Search time 3229.76 Seconds (without alignments)
10756.968 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4708233 seqs, 24227607955 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-075-947A-1
717
   GenEmbl: *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          caggtgaaactgcagtc.....cacagttggaaataaaacgg
                                                                                                                                                                                                                                                                                                                                    gb_ov:
gb_pat:
gb_pl:
gb_pl:
gb_pr:
gb_or:
gb_ro:
gb_ro:
gb_ro:
gb_ro:
gb_ro:
gb_ro:
gb_ro:
gb_ro:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GenCore version 5.1.6 Copyright (c) 1993 - 2005 Compugen Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                                                         gb_ba:*
gb_htg:*
gb_in:*
  723
735
735
727
927
716
723
807
1815
725
811
811
990
771
  AR231454
AR23155
AR482235
AR935617
AF035617
AF025471
AXX111695
AXX111695
AX374128
BD234870
AR371119
AR37142
CQ0768048
CQ0802042
AF189283
AP402255
AR407833
AR407833
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    sw model
                                                                                                                                                                                                                                                                     SUMMARIES
AR231454 Sequence
AR231456 Sequence
AR48235 Sequence
AF623617 Mus muscu
AF162710 Synthetic
AY75471 Synthetic
AY715471 Synthetic
AY3111695 Sequence
AX3111695 Sequence
AX3111695 Sequence
AX3111695 Sequence
AX111696 Sequence
AF189283 Synthetic
AF189283 Synthetic
AF11895 Sequence
CQ76802042 Sequence
AF402255 Synthetic
AX111696 Sequence
AR407831 Sequence
AR407831 Sequence
                                                                                                                                                                                                                                  Description
```

	a										ი	a	ი												
45	44	4	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20
510.8	511.8	511.8	511.8	512	512	512.4	512.6	512.6	513.4	513.4	513.4	513.4	513.4	515.8	515.8	516.6	517.4	517.8	520.4	521.6	521.6	522.2	523.8	524.8	531
71.2	71.4	71.4	71.4	71.4	71.4	71.5	71.5	71.5	6	٠	.6	o	6	٠,	71.9	72.1	72.2	72.2	72.6	72.7	72.7	72.8	73.1	73.2	74.1
729	2213	786	717	810	810	723	726	726	276248	138860	110000	61804	61582	720	719	738	1797	2364	732	726	726	726	894	789	717
12	N	12	10	σ	Q	12	σ	σ	N	2	N	N	N	9	σ	12	σ	σ	σ	σ	σ	σ	σ	12	12
AY171038	AC087118	AF279665	AF025535	CQ876881	CQ873224	AY307933	AR063196	A46596	AC087561	AC055703	AC074222_3	AC027647_3	RN499P20	AR117135	AR100151	AY635846	184705	E13412	E13410	AR063195	A46594	A46598	AR316970	AF488378	AF367377
AY171038 Synthetic	AC087118 Mus muscu	AF279665 Synthetic	AF025535 Mus muscu	CQ876881 Sequence	CQ873224 Sequence	AY307933 Synthetic	AR063196 Sequence	A46596 Sequence 27	AC087561 Mus muscu	AC055703 Mus muscu	Continuation (4 of	Continuation (4 of	AL603720 Rattus no	AR117135 Sequence	AR100151 Sequence	AY635846 Synthetic	I84705 Sequence 2	E13412 cDNA encodi	E13410 cDNA encodi	AR063195 Sequence	A46594 Sequence 25	A46598 Sequence 29	AR316970 Sequence	AF488378 Mus muscu	AF367377 Synthetic

ORIGIN	source	FEATURES	JOURNAL		TITLE	AUTHORS	REFERENCE		ORGANISM	SOURCE	KEYWORDS	VERSION	ACCESSION	DEFINITION	Locus	AR231454	RESULT 1
/organism="unknown" /mol_type="genomic DNA"	1717	Location/Qualifiers	Patent: US 6451995-A 1 17-SEP-2002;	methods	Single chain FV polynucleotide or peptide constructs of	Cheung, N K. V., Larson, S. M., Guo, H F., Rivlin, K. and Sadelain, M.	1 (bases 1 to 717)	Unclassified.	Unknown.	Unknown.	•	AR231454.1 GI:27272556	AR231454	Sequence 1 from patent US 6451995.	AR231454 717 bp DNA linear PAT 20-DEC-2003		

ALIGNMENTS

Ś

121

밁

S В

181 AAGCAGAAGTTCAAGGGCAAGGCCACATTGACTGTAGACAAGTCCTCCAGCACAGCCTAC 240

180

180

120

60

120

61 TCCTGCAAGACTTCTGGAAAACTTCACTGAATACACCATGCACTGGGTGAAGCAGAGC 61 TCCTGCAAGACTTCTGGANACAAATTCACTGAATACACCATGCACTGGGTGAAGCAGAGC

CAGGTGAAACTGCAGCAGTCAGGACCTGAACTGGTGNAGCCTGGGGCTTCAGTGAAGATA CAGGTGAAACTGCAGCAGTCAGGACCTGAACTGGTGNAGCCTGGGGCCTTCAGTGAAGATA 60

181

8

밁

μ Н Query Match Best Local Similarity Matches 717; Conserv

99.7%; Score 715; DB 6; ilarity 100.0%; Pred. No. 4e-211; Conservative 0; Mismatches 0

6; Length 717;

<u>,,</u>

Indels

```
JOURNAL
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 2
AR231456
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                    ORIGIN
                                                                                                                                                                                                                                                Query Match
Best Local Similarity
Matches 717; Conser
                                                                                                                                                                                                                                                                                                                                                                   source
                                                                                  121
                       181
                                                       121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                241
                                                                                                                    61
                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AR231456
Sequence 3 f
AR231456
AR231456.1
                                                                                                                                                                                                                    ۲
                                                                                                                                                                                                                                                                                                                                                                                               1 (base
Cheung, N
Single c
anti-gar
methods
Patent:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Unknown
                                                                                                                TCCTGCAAGACTTCTGGANACAAATTCACTGAATACACCATGCACTGGGTGAAGCAGAGC
                                                                                                                                                                               CAGGTGAAACTGCAGCAGTCAGGACCTGAACTGGTGNAGCCTGGGGCTTCAGTGAAGATA
 AAGCAGAAGTTCAAGGGCAAGGCCACATTGACTGTAGACAAGTCCTCCAGCACAGCCTAC
                                                                     (bases 1 to 1176)

(bases 1 to 1176)

neung,N.-K.V., Larson,S.M., Guo,H.-F., Rivlin,K. and Sadelain,M.

neung,N.-K., Larson,S.M., Guo,H.-F., Rivlin,K. and Sadelain,M.

neung,N.-K., Larson,S.M., Larson
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TCTTATTCTCTCACAATCAGCAGCATGGAGGCTGTAGATGCTGCCACTTATTACTGCCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GACACATCCAAACTGGCTTCTGGAGTCCCTGCTCGCTTCAGTGGCAGTGGGTCTGGGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GACACATCCAAACTGGCTTCTGGAGTCCCTGCTCGCTTCAGTGGCAGTGGGTCTGGGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGGCAGCTCAAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACGGTCCCGTTTGCTTACTGGGTCCAAGGGACCACGGTCACCGTCTCCTCAGGTGGAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATGGAGCTCCGCAGCCTGACATCTGAGGATTCTGCAGTCTATTACTGTGCAAGAGATACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCTTATTCTCTCACAATCAGCAGCATGGAGGCTGTAGATGCTGCCACTTATTACTGCCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACGGTCCCGTTTGCTTACTGGGTCCAAGGGACCACGGTCACCGTCTCCTCAGGTGGAGGC
                                                                                                                                                                                                                                                99.7%;
ilarity 100.0%;
Conservative
                                                                                                                                                                                                                                                                                                                                                              US 6451995-A 3 17-SEP-2002;
Location/Qualifiers
1, 1176
                                                                                                                                                                                                                                                                                                                              /organism="unknown"
/mol_type="genomic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GI:27272558
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            patent
                                                                                                                                                                                                                                                  <u>,,</u>
                                                                                                                                                                                                                                               Score 715; DB 6; L
Pred. No. 4.1e-211;
); Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1176 bp
US 6451995.
                                                                                                                                                                                                                                                                                                                                 DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DNA
                                                                                                                                                                                                                                                                               Length 1176
                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PAT
                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           20-DEC-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     717
                                                    180
                                                                                  180
                                                                                                                  120
                                                                                                                                                  120
                                                                                                                                                                                60
                                                                                                                                                                                                                60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                360
                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
AUTHORS
TITLE
JOURNAL
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 3
AR482235
LOCUS
                  Ş
                                                  밁
                                                                          δ
                                                                                                               밁
                                                                                                                                        ð
                                                                                                                                                                             밁
                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         유성
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    음 성
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             문
                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                               Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                              source
                    181
                                                  121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                646;
                                                                                                                  61
                                                                                                                                               19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AR482235
Sequence
AR482235
                                                                                                                                                                               -
                                                                                                                                                                                                                                                                                                                                                            1 (bases 1 to 717)
Solomon,B. and Frenkel,D.
Filamentous bacteriophage displaying
Patent: US 6703015-A 5 09-MAR-2004;
Location/Qualifiers
1. .717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AR482235.1
                                                                                                                                                                                                                                                                 Similarity
AAGCAGAAGTTCAAGGGCAAGGCCACATTGACTGTAGACAAGTCCTCCAGCACAGCCTAC
                                                                     TCCTGCAAGGGTTCTGGCTACACATTCACTGATTATGCTATGCACTGGGTGAAGCAGAGT
                                                                                                                                     TCCTGCAAGACTTCTGGANACAAATTCACTGAATACACCATGCACTGGGTGAAGCAGAGC
                                                                                                                                                                               TCTTATTCTCTCACAATCAGCAGCATGGAGGCTGTAGATGCTGCCACTTATTACTGCCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GACACATCCAAACTGGCTTCTGGAGTCCCTGCTCGCTTCAGTGGCAGTGGGTCTGGGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATAAGTTACATGCACTGGTACCAGCAGAAGCCTGTCACCTCCCCCCAAAAGATGGATTTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGGCAGCTCAAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GACACATCCAAACTGGCTTCTGGAGTCCCTGCTCGCTTCAGTGGCAGTGGGTCTGGGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATAAGTTACATGCACTGGTACCAGCAGAAGCCTGTCACCTCCCCCAAAAAGATGGATTTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGGCAGCTCAAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCTTATTCTCTCACAATCAGCAGCATGGAGGCTGTAGATGCTGCCACTTATTACTGCCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATGGAGCTCCGCAGCCTGACATCTGAGGATTCTGCAGTCTATTACTGTGCAAGAGATACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAGCAGAAGTTCAAGGGCAAGGCCACATTGACTGTAGACAAGTCCTCCAGCACAGCCTAC
                                                                                                                                                                                                                                             82.8%;
nilarity 90.1%;
Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         տ
                                                                                                                                                                                                                                                                                                                              /mol_type="genomic
                                                                                                                                                                                                                                                                                                                                               organism="unknown"/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GI:47244217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       patent
                                                                                                                                                                                                                                               ٥,
                                                                                                                                                                                                                                             Score 593.4; DB 6;
Pred. No. 3.2e-173;
0; Mismatches 68;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         717 bp
6703015.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           717
                                                                                                                                                                                                                                                                                                                               DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DNA
                                                                                                                                                                                                                                                                                                                                                                                                             an
                                                                                                                                                                                                                                                                                                                                                                                                             .beta.-amyloid
                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                             Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PAT
                                                                                                                                                                                                                                                ω
--
                                                                                                                                                                                                                                                                                                                                                                                                             epitope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           14-MAY-2004
                                                                                                                                                                                                                                               Gaps
```

660 600 600 540 540 480 480 420 420 360 360 300

밁 S 밁 δ 음 성 밁 Ş F 5 멍 δ 밁 S 맑 S

B Ş 밁 S

180 180 120 120 60

g ð

Ş

ì

(1

```
RESULT 4
AF035617
LOCUS
DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                  REFERENCE
AUTHORS
TITLE
                                                                                                                                                                JOURNAL
MEDLINE
PUBMED
REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                             VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ક
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               용
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                     SOURCE
                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                        ORGANISM
                                           CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                301
                                                                                                                                                                                                                                                                                                                                                                                                                                                661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      181
                                                                                                                                       Direct Submission
Submitted (24-NOV-1997) LMB, NCI, 37
4B20, Bethesda, MD 20892-4255, USA
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                  AF035617
Mus musculus scFv
AF035617
                                                                                                                                                                                      2 (bases 1 to 723)
Chowdhury, P.S.
                                                                                                                                                                                                                                1 (bases 1 to 723)
Chowdhury, P.S., Viner, J.L., Beers, R. and Pastan, I.
Isolation of a high-affinity stable single-chain Fv specific for mesothelin from DNA-immunized mice by phage display and construction of a recombinant immunotoxin with anti-tumor activity proc. Natl. Acad. Sci. U.S.A. 95 (2), 669-674 (1998)
                                                                                                                                                                                                                                                                                                                        Mus musculus
                                                                                                                                                                                                                        98118570
                                                                                                                                                                                                                                                                                                  Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                              Eukaryota;
                                                                                                                                                                                                                                                                                                                                    Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                        AF035617.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                          CATCAGCGGAGTAGTTACCCGCTCACGTTCGGTGCTGGGACACAGTTGGAAATAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TATGACACATCCAAACTGGCTTCTGGAGTCCCTGCTTCAGTGGCAGTGGGTCTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TATGACACATCCAAACTGGCTTCTGGAGTCCCTGCTCGCTTCAGTGGCAGTGGGTCTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCAGCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGGCAGCTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACTACGGTCCCGTTTGCTTACTGGGTCCAAGGGACCACGGTCACCGTCTCCTCAGGTGGA 357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATGGAGCTCCGCAGCCTGACATCTGAGGATTCTGCAGTCTATTACTGTGCAAGA---
                                                                                                                                                                                                                                                                                                                                                                                                                                                CATCAGCGGAGTAGTTACCCATTCACGTTCGGAGGGGGGGCCAAGCTGGAAATAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCTCTTATTCTCTCACAATCAGCAGCATGGAGGCTGAAGATGCTGCCACTTATTACTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCTCTTATTCTCTCACAATCAGCAGCATGGAGGCTGTAGATGCTGCCACTTATTACTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGTATAAGTTACATGCACTGGTACCAGCAGAAGCCTGTCACCTCCCCCAAAAGATGGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACTATGTCCTACTTTGACTACTGGGGCCAAGTGACCACGGTCACCGTCTCCTCAGGTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATGGAACTTGCCAGACTGACATCTGAGGATTCTGCCATCTATTACTGTGCAAGAGGGGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AACCAGAAGTTCAAGGGCAAGGCCACAATGACTGTAGACAAATCCTCCAGCACAGCCTAT 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CCAGCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGCCAGCTCA
                                                       mice
/codon_start=1
/product="scFv antibody SS"
/protein_id="AAC04760.1"
/db_xref="GI:2921394"
                                                   tissue type="spleen"
/clone_lib="phage display
mice immunized with DNA"
                                                                                               /mol_type="mRNA"
/strain="Balb/c"
                                                                                                                      organism="Mus musculus"
                                                                                       В
                                                                                                                                                                                                                                                                                                  Metazoa; Chordata;
Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                          GI:2921393
                                                                                       xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                              antibody
                                                                                                                                                                                                                                                                                                                                                                     723 bp
ss mRNA,
                                                                                                                                                                                                                                                                                                  Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                          mRNA
                                                                 library
                                                                                                                                                                                                                                                                                                                                                                             partial
                                                                                                                                                                   Convent
                                                                 made
                                                                                                                                                                                                                                                                                                                                                                                          linear
                                                                                                                                                                                                                                                                                                                                                                               cds.
                                                                                                                                                                   Drive,
                                                                 from
                                                                                                                                                                   Bld.
                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                                                                                                                                                                          30-SEP-1999
                                                                                                                                                                   37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -GAT
                                                                                                                                                                   R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  297
                                                                                                RESULT 5
AF162710
LOCUS
DEFINITION
            REFERENCE
AUTHORS
                                           ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                   δ
                                                                                                                                                                                                             밁
                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                닭
                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                       멍
                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                    ક
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Marc..
Best Local Simi
                                                                                                                                                                                                                                                                                                   484
                                                                                                                                                                                                                                                                                                                                              424
                                                                                                                                                                                                                                                                                                                                                                    415
                                                                                                                                                                                                                                                                                                                                                                                          364
                                                                                                                                                                                                                                                                                                                                                                                                                                     304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                       655
                                                                                                                                                                                                              604
                                                                                                                                                                                                                                   595
                                                                                                                                                                                                                                                        544
                                                                                                                                                                                                                                                                              535
                                                                                                                                                                                                                                                                                                                        475
                                                                                                                                                                                                                                                                                                                                                                                                             355
                                                                                                                                                                                                                                                                                                                                                                                                                                                          301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121
                                                                                                                                                                   664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61
  1 (bases 1 to
Terrada, E., Kon
and Cambra, M.
        synthetic construct
synthetic construct
other sequences; artificial sequences.
1 (bases 1 to 735)
1 (bases 1 to 735)
Karachbaumer, R.J., Giunta
                                                                           AF162710
Synthetic c
AF162710
AF162710.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 μ
                                                        synthetic
```

```
/translation="MQVQLQQSGPELEKPGASVKISCKASGYSPTGYTMNWVKQSHGK
SLEWIGLITPYNGASSYNQKFRCKATLTYDKSSSTAYMDLLSLTSEDSAVYFCARGGY
DGRGFDYMGQGTTVTVSSGVGGSGGGGSGGGGSDIELTQSPAIMSASPGEKVTMTCSA
SSSVSYMHWYQQKSGTSPKRWIYDTSKLASGVPGRFSGSGSGNSYSLTISSVEAEDDA
TYYCQQWSGYPLTFGAGTKLEIK"
```

723;

Similarity ATGGAGCTCCGCAGCCTGACATCTGAGGATTCTGCAGTCTATTACTGTGCAAGAGATACT CAGGTGAAACTGCAGCAGTCAGGACCTGAACTGGTGNAGCCTTGGGGCTTCAGTGAAGATA AAGCAGAAGTTCAAGGGCAAGGCCACATTGACTGTAGACAAGTCCTCCAGCACAGCCTAC CATGGAAAGAGCCTTGAGTGGACTTGGACTTATTACTCCTTACAATGGTGCTTCTAGCTAC CAGGTACAACTGCAGCAGTCTGGGCCTGAGCTGGAGAAGCCTTGGCGCTTCAGTGAAGATA GGGACCTCTTATTCTCTCACAATCAGCAGCATGGAGGCTGTAGATGCTGCCACTTATTAC TACGACGGGAGGGGTTTTGACTACTGGGGGCCAAGGGACCACGGTCACCGTCTCCTCAGGT ACGGTCCCG-----TITGCTTACTGGGTCCAAGGGACCACGGTCACCGTCTCCCCAGGT TCCTGCAAGACTTCTGGANACAAATTCACTGAATACACCATGCACTGGGTGAAGCAGAGC TGCCATCAGCGGAGTAGTTACCCGCTCACGTTCGGTGCTGGGACACAGTTGGAAATAAAA ATTATGACACATCCAAACTGGCTTCTGGAGTCCCTGCTTCGGCTTCAGTGGCAGTGGGTCT TCAAGTATAAGTTACATGCACTGGTACCAGCAGAAGCCTGTCACCTCCCCCAAAAGATGG TCTCCAGCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGCCAGC TCTCCAGCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGGCAGC TCCTGCAAGGCTTCTGGTTACTCATTCACTGGCTACACCATGAACTGGGTGAAGCAGAGC TGCCAGCAGTGGAGTGGTTACCCTCTCACGTTCGGTGCTGGGACAAAGTTGGAAATAAAA ATTTATGACACATCCAAACTGGCTTCTGGAGTCCCAGGTCGCTTCAGTGGCAGTGGGTCT TCAAGTGTAAGTTACATGCACTGGTACCAGCAGAAGTCAGGCACCTCCCCAAAAGATGG **AACCAGAAGTTCAGGGGCAAGGCCACATTAACTGTAGACAAGTCATCCAGCACAGCCTAC** Conservative 82.3%; <u>.</u>. Score 590.4; DB 10; Pred. No. 2.8e-172; 0; Mismatches 68; Indels Length 9 Gaps 714 663 654 603 594 543 534 483 474 423 414 363 354 303 300 243 183 180 123 120 63

construct single GI:9081896

735 bp mRNA linear e chain antibody 3CA5 mR

mRNA,

SYN 13-JUL-2000 partial cds.

Giunta, G.,

Galeffi,

```
JOURNAL
REFERENCE
AUTHORS
TITLE
   밁
                              S
                                                                      밁
                                                                                                     Ś
                                                                                                                                        밁
                                                                                                                                                                   Ş
                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                  망
                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                   뭐
                                                                                                                                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                                                                                                                                          문
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local
   547
                                    538
                                                                                                                                          427
                                                                                                                                                                                                             367
                                                                      487
                                                                                                         478
                                                                                                                                                                            418
                                                                                                                                                                                                                                               358
                                                                                                                                                                                                                                                                                  307
                                                                                                                                                                                                                                                                                                                     298
                                                                                                                                                                                                                                                                                                                                                     247
                                                                                                                                                                                                                                                                                                                                                                                      241
                                                                                                                                                                                                                                                                                                                                                                                                                          187
                                                                                                                                                                                                                                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         639;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Submitted (25-JUN-1999) Plant Protection and Biotechnology, Instituto Valenciano de Investigaciones Agrarias, Carrtera Moncada-Naquera km. 4.5, Moncada, Valencia 46113, Spain Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   closterovirus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Terrada, E., Kerschbaumer, R.J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Fully 'recombinant ELISAs' for routine detection closterovirus (CTV) in plant material
                   TATGACACACTCCAAACTGGCTTCTGGAGTCCCTGCTCGCTTCAGTGGCAGTGGGTCTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGTATAAGTTACATGCACTGGTACCAGCAGAAGCCTGTCACCTCCCCCAAAAGATGGATT
                                                                                                                                                                 CCAGCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGGCAGCTCA
                                                                                                                                                                                                                                                                              GATCACTACTTCACTACTCCCCCAACGCCACCGCTCACCCTCTCCCTCAGGTCGA
                                                                                                                                                                                                                                                                                                                                                                         ATGGAGCTCCGCAGCCTGACATCTGAGGATTCTGCAGTCTATTACTGTGCAAG---AGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                             AAGCAGAAGTTCAAGGGCAAGGCCACATTGACTGTAGACAAGTCCTCCAGCACAGCCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCCTGCAAGACTTCTGGANACAAATTCACTGAATACACCATGCACTGGGTGAAGCAGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CAGGTAAAGCTGCAGGAGTCAGGACCTGACCTGGTGAAGCCTGGGGCTTCAGTGAAGATA
TATCTCACATCCAACCTGGCTTCTGGAGTCCCTGAACGCTTCAGTGGCAGTGGGTCTGGG
                                                                      AGTGTAAGTTACATGTACTGGTACCAGCAGAAGCCAGGATCCTCCCCCAAACCCTGGATT
                                                                                                                                      CCAGCACTCATGTCTGCATCTCCAGGGGACAAGGTCACCATGACCTGCAGTGCCAGCTCA
                                                                                                                                                                                                           ĠĠĊĠĠŤŤĊĀĠĠĊĠĠĠĊĠĊĠĊĊŤĊŤĠĠĊĠĠŤĠĠĊĠĠĂŤĊĠĠĀĊĂŤŤĠĀĠĊŤĊĀĊĊĊĀĠŤĊĬ
                                                                                                                                                                                                                                            ACTACGGTCCCGTTTGCTTACTGGGTCCAAGGGACCACGGTCACCGTCTCCTCAGGTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CATGGAAAGAGCCTTGAGTGGATTGGACGTGTTATTCCTAACAATGGTGGTACTAGCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CAGGTGAAACTGCAGCAGTCAGGACCTGAACTGGTGNAGCCTGGGGGCTTCAGTGAAGATA
                                                                                                                                                                                                                                                                                                                                                   ATGGAGCTCCGCAGCCTGACATCTGAGGACTCTGCGGTCTATTACTGTGCAAGCCCTTAT
                                                                                                                                                                                                                                                                                                                                                                                                                         AACCAGAAGTTCAAGGGCAAGGCCATATTAACTGTAGACAAGTCATCCAGCAGAGCCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (bases 1 to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /transl_table=11
/transl_table=11
/product="single chain antibody 3CA5"
/product="single chain antibody 3CA5"
/product="d="AAF82631.1"
/product="d="AAF82631.1"
/db_xref="d1:9081897"
/db_xref="d1:9081897"
/translation="MAQVKLQESGPDLVKPGASVKISCKASGYSFTGYYIHWVKQSHG
/translation="MAQVKLQESGPDLVKPGASVKISCKASGYSFTGYYIHWVKQSHG
/translation="MAQVKLQESGPDLIVKPGASVKISCKASGYSFTGYYIHWVKQSHG
/translation="MAQVKLQESGPDLIVKPGASVKISCKASGYSFTGYYIHWVKQSHG
/translation="MAQVKLQESGSKEWATKLTSNLASGYDERFSGSGSGTSYSLTISSMEABDAA
TYYCQQWSSNPYTFGGGTKLEIKRAGR"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /moi_type="mRNA"
/db xref="taxon:32630"
/db xref="taxon:32630"
/note="derived from variable regions of heavy and light
/note="derived from variable regions of heavy and light
chains of an antibody isolated from hybridoma cells of Mus
musculus (BALB/c strain)"
1. .>735
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          organism="synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       'codon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      80.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ۰,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 580.4; DB 12; Pred. No. 3.7e-169; 0; Mismatches 78;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          construct"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Himmler, G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Cambra
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   of Citrus tristeza
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ω
•
909
                                                                     546
                                                                                                                                        486
                                                                                                                                                                          477
                                                                                                                                                                                                                                            417
                                                                                                                                                                                                                                                                                366
                                                                                                                                                                                                                                                                                                                 357
                                                                                                                                                                                                                                                                                                                                                   306
                                                                                                                                                                                                                                                                                                                                                                                                                         246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               126
                                  597
                                                                                                     537
                                                                                                                                                                                                             426
                                                                                                                                                                                                                                                                                                                                                                                      297
                                                                                                                                                                                                                                                                                                                                                                                                                                                         240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60
```

```
JOURNAL
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 6
AY725471
LOCUS
                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCESSION
VERSION
                                              밁
                                                                                                              밁
                                                                                                                                        Ş
                                                                                                                                                                        밁
                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                              ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                 Query Match
Best Local S
Matches 627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          source
                   241
                                                 184
                                                                                                              124
                                                                                                                                           121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Zhao,B. and Xu,C.
Cloning and sequencing of the Scientialium perfringens type A
Chin. J. Prev. Vet. Med. 22, 30
2 (bases 1 to 735)
Zhao,B. and Xu,C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          865
                                                                                                                                                                        64
                                                                                                                                                                                                       61
                                                                                                                                                                                                                                       4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Synthetic construct anti-alpha complete cds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Submitted (06-AUG-2004) Coll
University, Yuhua Road, Shij
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            synthetic construct synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                other sequences;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AY725471.1
                                                                                                                                                                                                                                                                                                               Similarity
ATGGAGCTCCGCAGCCTGACATCTGAGGGATTCTGCAGTCTATTACTGTGCAAGAGATACT
                                                 AATGAGAATTCAAGGGCAAGGCCACACTGACTGCAGACAAATCCTCCAGCACAGCCTAC
                                                                   AAGCAGAAGTTCAAGGGCAAGGCCACATTGACTGTAGACAAGTCCTCCAGCACAGCCTAC
                                                                                                              CCTGGACAGGGACTTGAGTGGATTGGATGGATTTATCCTGGAGATGGTAGTACTAAGTAC
                                                                                                                                   TCCTGCAAGGCTTCTGGTTACACCTTCACAAGCTACGATATAAACTGGGTGAAGCAGAGG
                                                                                                                                                                                             TCCTGCAAGACTTCTGGANACAAATTCACTGAATACACCATGCACTGGGTGAAGCAGAGC
                                                                                                                                                                                                                                     CAGGTGAAGCTGCAGGAGTCTGGACCTGGAGCTGAAGCCTGGGGCTTTAGTGAAGATA
                                                                                                                                                                                                                                                         CAGGTGAAACTGCAGCAGTCAGGACCTGAACTGGTGNAGCCTGGGGGCTTCAGTGAAGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CAGCAGTGGAGTAGTAACCCATACACGTTCGGAGGGGGGGACCAAGCTGGAAATTAAACGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CATCAGCGGAGTAGTTACCCGCTCACGTTCGGTGCTGGGACACAGTTGGAAATAAAACGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCTCTTACTCTCACAATCAGCAGCATGGAGGCTGAAGATGCTGCCACTTATTACTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCTCTTATTCTCTCACACATCAGCAGCATGGAGGCTGTAGATGCTGCCACTTATTACTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (bases 1 to 735)
                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                         /codon_start=1
/trans1_table=11
/product="anti-alpha toxin ScFv-1A8 antibody"
/protein_id="AAU11282.1"
/protein_id="AAU11282.1"
/db_xref="G1:5185986"
/translation="MOVELQESGPELVKPGALVKISCKASGYTFTSYDINWVKORPGQ
/translation="MOVELQESGPELTADKSSSTAYMQLSSLTSENSAVYFCARYYR
SYFDYMGQGTTVTVSSGGGGSGGGGGGGGDNVLTQSPAIMSASPGEKVTMTCSASS
SYSYMMMFQQDKCTSPKLMIYSTSUNLASGVPARFSGSGSGTSYSLTISRMEAEDAAT"
YCQQRSSYPFTFGSGTKLEIKRAAAE"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1. .735
/organism="synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /mol_type="other DNA"
/db_xref="taxon:32630"
/cell_line="hybridoma 1A8"
/note="derived from Clostridium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GI:51859985
                                                                                                                                                                                                                                                                                                              80.1%;
87.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              artificial sequences
                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                 Score 574.2; DB 12;
Pred. No. 3.1e-167;
0; Mismatches 90;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       College of Life Science,
Shijiazhuang, Hebei 0500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A
30-33 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             construct"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ScFv-1A8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          toxin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DNA linear
in ScFv-1A8 anti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               perfringens type
                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         050016,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 anti-alpha toxin of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        near SYN 07-SEP-2004
antibody gene,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Hebei Normal
16, China
                                                                                                                                                                                                                                                                                                                               735;
                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ă
                                                                              240
                   300
                                                 243
                                                                                                              183
                                                                                                                                                                        123
                                                                                                                                                                                                       120
                                                                                                                                                                                                                                       63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               999
                                                                                                                                             180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            657
                                                                                                                                                                                                                                                                                                 0
```

1)

361

```
RESULT 7
AX111695
LOCUS
DEFINITION
ACCESSION
VERSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
AUTHORS
TITLE
                                                                                          밁
                                                                                                           S
                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
              ર્
                                       밁
                                                           S
                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ঠ
                                                                                                                                                                                                                                               ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                         Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM
                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                   JOURNAL
                                                                                                                                                                                                                                                                                                              source
                 182
                                          263
                                                                 122
                                                                                           203
                                                                                                                                             143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  244
                                                                                                                                                                                             630;
                                                                                                                  62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AX111695
Sequence 2 f
AX111695
AX111695.1
                                                                                                                                                                   N
                                                                                                                                                                                                                                                                                                                      Gene transfer in human lymphocytes using targeting
Patent: WO 0125415-A 2 12-APR-2001;
Bundesrepublik Deutschland LET (DE)
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                           synthetic construct synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                       Cichutek, K. and
                                                                                                                                                                                                                                                                                                                                                                                                                  other
                                                                                                                                                                                                          Similarity
                                                                                                                                                         AGGTGAAACTGCAGCAGTCAGGACCTGAACTGGTGNAGCCTGGGGCTTCCAGTGAAGATAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CAGCGGAGTAGTTACCCGGTCACGTTCGGTGCTGGGACACAGTTGGAAATAAAACGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCTTATTCTCTCACAATCAGCAGCATGGAGGCTGTAGATGCTGCCACTTATTACTGCCAT 660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GACACATCCAAACTGGCTTCTGGAGTCCCTGCTCCGCTTCAGTGGCAGTGGGTCTGGGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATAAGTTACATGCACTGGTACCAGCAGAAGCCTGTCACCTCCCCCAAAAGATGGATTTAT
AGCAGAAGTTCAAGGGCAAGGCCACATTGACTGTAGACAAGTCCTCCAGCACAGCCTACA
                                                         CTTGCAAGGCTTCTGGCTACACCTTCACCAGCTACTGGATGCACTGGTTGAAGCAGAGGC
                                                                                                                  CCTGCAAGACTTCTGGANACAAATTCACTGAATACACCATGCACTGGGTGAAGCAGAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CAAAGGAGTAGTTACCCATTCACGTTCGGCTCGGGGACAAAGTTGGAAATAAAACGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCTTACTCTCACAATCAGCCGAATGGAGGCTGAAGATGCTGCCACTTATTACTGCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGCACATCCAACCTGGCTCTGGAGTCCCTGCTCGGTGGCAGTGGATCTGGGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GTAAGTTACATGCACTGGTTCCAGCAGAAGCCAGGCACTTCTCCCCAAACTCTGGATTTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGGCAGCTCAAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGTTCAGGCGGAGGTGGCTGTGGCGGTGGCGGATCGGACAATGTGCTCACCCAGTCTCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACGGTCCCGTTTGCTTACTGGGTCCAAGGGACCACCGGTCACCGTCTCCAGGTGGAGGC
                                       ATGCAGCTCAGCAGCCTGACTTCTGAGAACTCTGCAGTCTATTTCTGTGCAAGATACTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGGTACTACTTTGACTACTGGGGCCAAGGGACCACGGTCACCGTCTCCTCAGGTGGAGGC
                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                sequences; artificial sequences
                                                                                                                                                                                                                                                       /organism="synthetic construct"
/mol_type="unassigned DNA"
/db_xref="taxon:32630"
/note="scFv kodierende Sequenz"
                                                                                                                                                                                                                                                                                                           1. .927
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GI:13927960
                                                                                                                                                                                                         79.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        927 bp
Patent WO0125415.
                                                                                                                                                                                                                                                                                                                                                                                        Engelstaedter, M.
                                                                                                                                                                                             0
                                                                                                                                                                                           Score 568.4; DB
Pred. No. 2e-165;
D; Mismatches 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DNA
                                                                                                                                                                                                                   DB 6;
                                                                                                                                                                                             83;
                                                                                                                                                                                                                                                                                                                                                                           retroviral
                                                                                                                                                                                             Indels
                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         linear
                                                                                                                                                                                                                       927;
                                                                                                                                                                                                                                                                                                                                                                           BCEV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PAT 30-APR-2001
                                                                                                                                                                                             ω
--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               717
                                                                                                                                             202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          360
                                         322
                                                                  181
                                                                                                                  121
                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   303
                                                                                          262
                                                                                                                                                                                                                                                                                                           REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                      RESULT 8
AX839011
LOCUS
DEFINITION
ACCESSION
VERSION
VERSION
KEYWORDS
SOURCE
   문
                   Ś
                                                     밁
                                                                          ঠ
                                                                                                      밁
                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        닭
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                  FEATURES
                                                                                                                                                      Query Match
Best Local S
Matches 629
                                                                                                                                                                                                                                                                                                                                                                            ORGANISM
                                                                                                                                                         629;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        680
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           620
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             500
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                443
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  383
   120
                           121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   323
                                                     61
                                                                           61
                                                                                                       μ
                                                                                                                               Н
                                                                                                                                                                                                                                                                                               Rancourt, C., Piche, A. and Beaudin, J.1.
Downregulation of ca 125 tumor antigen
Patent: WO 03076465-A 1 18-SEP-2003;
Universite de Sherbrooke (CA)
                                                                                                                                                                                                                                                                                                                                                                                                                            AX839011
Sequence 1 from
AX839011
                                                                                                                                                                                                                                                                                                                                                                            synthetic
                                                                                                                                                                                                                                                                                                                                                                                        synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                  AX839011.1
                                                                                                                                                                   Similarity
                   CAGGTGAAACTGCAGCAGTCAGGACCTGAACTGGTGAAGCCTGGGGCTTCAGTGAAGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AGCGGAGTAGTTACCCGCTCACGTTCGGTGCTGGGACACAGTTGGAAATAAAACGG 717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CGGTCCCGTTTGCTTACTGGGTCCAAGGGACCACCGTCACCGTCTCCCTCAGGTGGAGGCG
   CATGGAAAGAGCCTTGAGTGGATTGGATATATTTATCCTTACAATGGTGATACTGGCTAC
                                                     CAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGGCAGCTCAAGTA
                                                                                                         CAGGTCCAGCTGCAGGAGTCAGGACCTGAACTGGTGAAACCTGGGGGCCTCAGTGAAGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTTATTCTCTCACAATCAGCAGCATGGAGGCTGTAGATGCTGCCACTTATTACTGCCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACACATCCAAACTGGCTTCTGGAGTCCCTGCTTCAGTGGCAGTGGGTCTGGGACCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TAAGTTACATGCACTGGTACCAGCAGAAGCCAGGCACCTCCCCCAAAAGATGGATTTATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TAAGTTACATGCACTGGTACCAGCAGAAGCCTGTCACCTCCCCCCAAAAGATGGATTTATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATG---CTATGGACTACTGGGGCCAAGGGACCAACGTCACCGTCTCCTCAGGTGGATGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTTATTCTCTCCCAATCAGCAGCATGGAGGCTGAAGATGCTGCCACTTATTACTGCCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACACATCCAAACTGGCTTCTGGAGTCCCTGCTCGCTTCAGTGGCAGTGGGTCTGGGACCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGCCAGCTCAAGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGCACCTCAGCAGCCTGACATCTGAGGACTCTGCGGTCTATTACTGTGCAAGAAAGGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TGGAGCTCCGCAGCCTGACATCTGAGGATTCTGCAGTCTATTACTGTGCAAGAGATACTA 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATCAAAACTTCAAGGGCAAGGCCACACTGACTGTAGACAAGTCCTCCACCACAGTCTACA
                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                               sequences; artificial sequences.
                                                                                                                                                                                                                   /organism="synthetic construct"
/mol_type="unassigned DNA"
/mol_type="unassigned DNA"
/db xrefs"ttaxon:32630"
/noEe="VH-linker-VL portion of
                                                                                                                                                                                                                                                                                  Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                           construct
                                                                                                                                                                                                                                                                                                                                                                                                                  GI:39922521
                                                                                                                                                                   77.5%;
87.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                           716 bp
Patent W003076465.
                                                                                                                                                         0
                                                                                                                                                      Score 555.8; DB 6;
Pred. No. 1.7e-161;
0; Mismatches 84;
                                                                                                                                                                                                                                                                                                                                                                                                                                                        DNA
                                                                                                                                                                                                                                                                                                                          and
                                                                                                                                                                                                                       VK-8-1
                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                          uses
                                                                                                                                                                               Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                        linear
```

PAT

15-DEC-2003

799 661 739 601 679 541 619 481 559 421 499

4

119 120

variable

723;

9

Gaps

180 120 120 60 60

180

```
RESULT 9
AY374128
LOCUS
DEFINITION
                                                                                                                                                                                                                                         JOURNAL
PUBMED
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                   REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                               ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                            FEATURES
                                                                                                                                                                                           TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                     TITLE
                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM
                                                  CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     658
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                  Beninati, C., Arseni, S., Mancuso, G., Magliani, W., Conl
Midiri, A., Biondo, C., Polonelli, L. and Teti, G.
Protective immunization against group B meningococci
anti-idiotypic mimics of the capsular polysaccharide
and minimum of the capsular polysaccharide
                                                                                                                                                                                                                                                                                                                                                                                                                                                     723 bp synthetic construct anti-idiotypic fragment mRNA, partial cds. AY374128
                                                                                                                                                                                                        Beninati,C., Arseni,S., Mancuso,G., Magliani,W., Midiri,A., Biondo,C., Polonelli,L. and Teti,G. Direct Submission
                                                                                                                                                                        Submitted (26-AUG-2003) Pathology and Experimental Microbiology, University of Messina, Via C. Valeria, 1 (Policlinico), Messina,
                                                                                                                                                                                                                                                                                                                                                                                                 synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                               synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                              AY374128.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACGGTCCCG---TTTGCTTACTGGGTCCAAGGGACCACGGTCACCGTCTCCTCAGGTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TATGACACATCCAAACTGGCTTCTGGAGTCCCCTGCTTCAGTGGCAGTGGGTCTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CCAGCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGGCAGCTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCTCTTATTCTCTCACAATCAGCAGCATGGAGGCTGTAGATGCTGCCACTTATTACTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGTATAAGTTACATGCACTGGTACCAGCAGAAGCCTGTCACCTCCCCCCAAAAGATGGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCAGCAATCCTGTCTGCATCTCCAGGGGAGAAGGTCACAATGACTTGCAGGGCCACCCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCGGATCGGACATCCAGATGACCCAGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATGGAGCTCCGCAGCCTGACATCTGAGGATTCTGCAGTCTATTACTGTGCAAGAGATACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AACCAGAAATTCAGGAACAAGGCCTCCTTGACTGTAGACACCTTCCTCCAGCACAGCCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAGCAGAAGTTCAAGGGCAAGGCCACATTGACTGTAGACAAGTCCTCCAGCACAGCCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCTCTTACTCTCACAGTCAGCAGAGTGGAGGCTGAAGATGCTGCCACTTATTACTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TATACCACATCCAACCTGGCTTCTGGAGTCCCTGCTCCGCTTCAGTGGCGGTGGGTCTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGTGTAAGTTACATGCACTGGTATCAGCAGAAGCCAGGATCCTCCCCCAAACCTTGGATT
                                                                                                                                                                                                                                                      (bases 1 to 723)
                                                                                                                                                                                                                                                                                                                                                                ner sequences; ar
(bases 1 to 723)
/note="binds to anti-meningococcal Seam 3 monoclonal
antibody; mimics immunogenic features of group B
meningoccoccal polysaccharide"
                                                                                                /mol
                                                            db_xref="taxon:32630"
                                                                              /mol_type="mRNA"
/isolation_source="Mus
                                                                                                             organism="synthetic
                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                              GI:34979267
                                                                                                                                                                                                                                                                                                                                                                                artificial sequences
                                                                                                             construct"
                                                                              musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         mRNA linear
B5 single chain
                                                                              BALB/c"
                                                                                                                                                                                                                                                                                                                                                 Conti,S.,
                                                                                                                                                                                                                                       Conti,S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SYN 12-FEB-2004
variable
                                                                                                                                                                                                                                                                                                                  nging
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       716
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   714
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   359
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    659
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            539
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         240
                                                                                                                                                                           Мe
 RESULT 10
BD234870
LOCUS
                                                                                                                                                                                                       밁
                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       맑
                                                                                                 5
                                                                                                                                          В
                                                                                                                                                               δ
                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
Matches 622; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                              415
                                                                                                                                                                                                                                                                                                                                                                                                                                                             361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       241
                                                                               721
                                                                                                           715
                                                                                                                                            661
                                                                                                                                                                        655
                                                                                                                                                                                                          601
                                                                                                                                                                                                                                                                      541
                                                                                                                                                                                                                                                                                                    535
                                                                                                                                                                                                                                                                                                                                    481
                                                                                                                                                                                                                                                                                                                                                                  475
                                                                                                                                                                                                                                                                                                                                                                                               421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -
    BD234870
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CAGGTGAAACTGCAGCAGTCAGGACCTGAACTGGTGNAGCCTGGGGCTTCAGTGAAGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCCTGCAAGACTTCTGGANACAAATTCACTGAATACACCATGCACTGGGTGAAGCAGAGC
                                                                                                                                            TGCCAGCAGTTTACTAGTTCCCCCGTACACGTTCGGAGGGGGGCACAAGCTGGAAATAAAA
                                                                                                                                                                           TGCCATCAGCGGAGTAGTTACCCCGCTCACGTTCGGTGCTGGGACACAGTTGGAAATAAAA
                                                                                                                                                                                                                             GGGACCTCTTATTCTCTCACAATCAGCAGCATGGAGGCTGTAGATGCTGCCACTTATTAC
                                                                                                                                                                                                                                                                                      ATTTATGACACATCCAAACTGGCTTCTGGAGTCCCTGCTCGCTTCAGTGGCAGTGGGTCT
                                                                                                                                                                                                                                                                                                                                    TCAAGTGTAAATTACATGTACTGGTACCAGCAGAAGTCAGATGCCTCCCCCAAACTATGG
                                                                                                                                                                                                                                                                                                                                                    TCAAGTATAAGTTACATGCACTGGTACCAGCAGAAGCCTGTCACCTCCCCCAAAAGATGG
                                                                                                                                                                                                                                                                                                                                                                                               TCTCCAGCAATCATGTCTGCATCTCTAGGGGAGAAGGTCACCATGAGCTGCAGGGCCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                 TCTCCAGCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGGCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATTACTACAGGCCCATGGACTACTGGGGCCAAGGCACCACGGTCACCGTCTCCTCAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GATACTACGGTCCCGTTTGCTTACTGGGTCCAAGGGACCACGGTCACCGTCTCCTCAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATGGAGCTCAGCAGCCTGACCTCTGAGGACTCTGCGGTCTATTACTGTGCAAGAAGGGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATGGAGCTCCGCAGCCTGACATCTGAGGATTCTGCAGTCTATTACTGTGCAAGA-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AATGAGAAGTTCAAAGGCAAGGCCACACTGACTTCAGACAAATCCTCCAGCACCACCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAGCAGAAGTTCAAGGGCAAGGCCACATTGACTGTAGACAAGTCCTCCAGCACAGCCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCTGGGCAGGGCCTTGAGTGGATTGGACATATTAATCCTTACAATGGTGGTACTAAGTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCCTGCAAGGCTTCTGGATACACATTCAGTAGCTATATTATGCACTGGGTAAGGCAGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CAGGTGAAACTGCAGCAGTCAGGACCTGAACTGGCAAAACCTGGGGCCTCAGTGAAGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                             717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /translation="QVKLQQSGPELAKPGASVKMSCKASGYTFSSYIMHWVRQKGGQGLEWIGHINPYNGGTKYNEKFKGKATLTSDKSSSTTYMELSSLTSEDSAVYCARRGNYYRFWDYMGQGTTYTVSSGGGSGGGGSGGGGSDIELTQSPAIMSASLGEKVTMSCRASSVNYMYWYQQKSDASPKLWIYYTSNILAPGVPARFSGSGSGNSYSLTISSMEGEDAATYYCQQFTSSPYTFGGGHKLEIKR"
                                                                                                                                                                                                           /codon_start=1
/transl_table=11
/product="anti-idiotypic
fragment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /protein_id="AAQ83757.1"
/db_xref="GI:34979268"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     76.7%;
86.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       °.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 550.2; DB 12;
Pred. No. 9.5e-160;
0; Mismatches 95;
    807
   đ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              85
    DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
    linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              chain
```

8 밁 S 밁 Š В S 밁 Ś 밁 S 밁 δ 밁 Ş 밁 Ş

밁

λ

PAT

17-JUL-2003

714 660 654 600 594 540 534

720

474 420

480

360 354 300 294 240 240

```
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                      Ś
                                                                                                                                밁
                                                                                                                                                                       片
                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                  á
                 δ
                                          밁
                                                            ঠ
                                                                                 밁
                                                                                                                                                  5
                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                         र्
                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                               S
 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 76.4%;
Best Local Similarity 85.2%;
Matches 610; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Coia,G., Hudson,P.J., Iliades,P. and Irving,R.A.
Continuous in vitro evolution
Patent: JP 2002515224-A 4 28-MAY-2002;
DIATECH PTY LTD

OS Homo sapiens (human)
PD 2002515224-A/4
PD 28-MAY-2002
PF 07-MAY-1999 JP 2000548452
PF 08-MAY-1998 AU
PD 3445
PI GREGORY COIA, PETER JOHN HUDSON, PETER ILIADES, R
PI TRVING
PC C12N15/09,C12N15/01,C12P21/02,C12N15/00,C12N15
Description of Sequence:Antihepatitis surface antig
                                                                                     370
                                                                                                          362
                                                                                                                                 310
                                                                                                                                                      302
                                                                                                                                                                                                                        190
                                          430
                                                                422
                                                                                                                                                                            250
                                                                                                                                                                                                  242
                                                                                                                                                                                                                                             182
                                                                                                                                                                                                                                                                   130
 490
                    482
                                                                                                                                                                                                                                                                                         122
                                                                                                                                                                                                                                                                                                                                    62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BD234870
BD234870.1 GI:330446
JP 2002515224-A/4.
Homo sapiens (human)
                                                                                                                                                                                                                                                                                                               70
                                                                                                                                                                                                                                                                                                                                                          10
                                                                                                                                                                                                                                                                                                                                                                               N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FFE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 807)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Continuous
           TAAGTTACATGCACTGGTACCAGCAGAAGCCTGTCACCTCCCCCAAAAGATGGATTTATG
                                                     CAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGGCAGCTCAAGTA
                                                                                      GTTCAGGCGGAGGTGGCTGGCGGTGGCGGATCGGACATTGTGCTGACCCAATCTCCAG
                                                                                                  ACTGGTCCTTCGATGTCTGGGGGCCAAGGGACCACGGTCACCGTCTCCTCAGGTGGAGGCG
                                                                                                                                               CGGTCCCGTTTGCTTACTGGGTCCAAGGGACCACGGTCACCGTCTCCTCAGGTGGAGGCG
                                                                                                                                                                                           TGGAGCTCCGCAGCCTGACATCTGAGGATTCTGCAGTCTATTACTGTGCAAGAGATACTA
                                                                                                                                                                                                                       ACCAGAAGTTTGAGGCCAAGGCCACAATGACTGTAGACAAATCCTCCAACACACAGGCTATT
                                                                                                                                                                                                                                          AGCAGAAGTTCAAGGGCAAGGCCACATTGACTGTAGACAAGTCCTCCAGCACAGCCTACA
                                                                                                                                                                                                                                                                                                                             CCTGCAAGACTTCTGGANACAAATTCACTGAATACACCATGCACTGGGTGAAGCAGAGCC
                                                                                                                                                                                                                                                                                                                                                                      AGGTGAAACTGCAGCAGTCAGGACCTGAACTGGTGNAGCCTGGGGCTTCAGTGAAGATAT
                                                                                                                                                                            TGGAACTTGGCAGATTGACATCTGAGGATTCTGCCATCTATTACTGTGCAAGAGTGATCG
                                                                                                                                                                                                                                                                   ATGCCAAGAGTCTAGAGTGGATTGGACTTATTAGTAATTCCTTTGGTAATACAAACTACA
                                                                                                                                                                                                                                                                                        TCAGGTACGTGCACTGGTACCAACAGAAGTCAGGCACCTCCCCCAAAAGATGGATTTATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  IRVING
C12N15/09,C12N15/01,C12P21/02,C12N15/00,C12N15/00
ription of Sequence:Antihepatitis surface antigen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens (human)
y2 2002515224-A/4
28-MAY-2002
07-MAY-1999 JP 2000548452
08-MAY-1998 AU PP 3445
GREGORY COIA, PETER JOHN HUDSON, PETER ILIADES, ROBERT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /organism='Homo
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                         /organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GI:33044640
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   vitro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   evolution.
                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                    Score 547.6; DB 6;
Pred. No. 6.2e-159;
D; Mismatches 106;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 sapiens
                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                        Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (human)'.
                                                                                                                                                                                                                                                                                                                                                                                                                            807;
                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0 CC
(4C2)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             გ
                    541
                                                                481
                                                                                                                                                                                                  301
                                                                                                                                                                                                                                                                                         181
549
                                          489
                                                                                      429
                                                                                                           421
                                                                                                                                369
                                                                                                                                                                            309
                                                                                                                                                                                                                                            241
                                                                                                                                                                                                                                                                   189
                                                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                          69
                                                                                                                                                      361
                                                                                                                                                                                                                        249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
AUTHORS
TITLE
JOURNAL
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 11
AR317194
LOCUS
DEFINITION
             ર્
                                         밁
                                                       S
                                                                              밁
                                                                                                      Ş
                                                                                                                                밁
                                                                                                                                               ঠ
                                                                                                                                                                          밁
                                                                                                                                                                                              S
                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                      ঠ
                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                       á
                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  source
                                                                                                                                                                                                                                                                                                                                                                                                      610;
                    482
                                                                                      370
                                                                                                          362
                                                                                                                                310
                                                                                                                                                                                                                        190
490
                                         430
                                                               422
                                                                                                                                                      302
                                                                                                                                                                            250
                                                                                                                                                                                                 242
                                                                                                                                                                                                                                           182
                                                                                                                                                                                                                                                                   130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     670
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           662
                                                                                                                                                                                                                                                                                                               70
                                                                                                                                                                                                                                                                                                                                   62
                                                                                                                                                                                                                                                                                                                                                         10
                                                                                                                                                                                                                                                                                                                                                                               N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AR317194.1
                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
TCAGGTACGTGCACTGGTACCAACAGAAGTCAGGCACCTCCCCCAAAAGATGGATTTATG
```

```
1 (bases 1 to 807)
Coia,G., Hudson,P.J., Iliades,P. and
Continuous in vitro evolution
Patent: US 656262-A 4 13-MAY-2003;
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 4 from AR317194
TAAGTTACATGCACTGGTACCAGCAGAAGCCTGTCACCTCCCCCAAAAGATGGATTTATG
                                                                   CAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGGCAGCTCAAGTA
                                                                                                                                           CCTGCAAGACTTCTGGANACAAATTCACTGAATACACCATGCACTGGGTGAAGCAGAGCC
                                                                                                                                                                                              ACTGGTCCTTCGATGTCTGGGGCCAAGGGACCACGGTCACCGTCTCCTCAGGTGGAGGCG
                                                                                                                                                                                                                     CGGTCCCGTTTGCTTACTGGGTCCAAGGGACCACGGTCACCGTCTCCCTCAGGTGGAGGCG
                                                                                                                                                                                                                                                                AGCAGAAGTTCAAGGGCAAGGCCACATTGACTGTAGACAAGTCCTCCAGCACAGCCTACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGGTGAAACTGCAGCAGTCAGGACCTGAACTGGTGNAGCCTGGGGGCTTCAGTGAAGATAT
                                                                                                                        GTTCAGGCGGAGGTGGCTCTGGCGGTGGCGGATCGGACATTGTGCTGACCCAATCTCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGCGGAGTAGTTACCCGCTCACGTTCGGTGCTGGGACACAGTTGGAAATAAAACGG 717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CTTATTCTCTCACAATCAGCAGCATGGAGGCTGTAGATGCTGCCACTTATTACTGCCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACACATCCAAACTGGCTTCTGGAGTCCCTGCTCGCTTCAGTGGCAGTGGGTCTGGGACCT
                                                                                                                                                                                                                                                                                                                                            ACCAGAAGTTTGAGGCCAAGGCCACAATGACTGTAGACAAATCCTCCAACACAGGCTATT
                                                                                                                                                                                                                                                                                                                                                                                                                  ATGCCAAGAGTCTAGAGTGGATTGGACTTATTAGTAATTCCTTTGGTAATACAAACTACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCTGCAAGGGTTCCGGCTACACATTCACTGATTATGCTATGCATTGGGTGAAGCAGAGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATGTGAAGCTTCAGGAGTCAGGGCCTGAGCTGAGGCCCCGGGGTCTCAGTGAAGATTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACTGGAGTAGTAACCCTCCCACGTTCGGTGCTGGGACCAAGCTGGAAATAAAACGG 725
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTCACTCTCTCACAATCAGCAGCTTGGAGGCTGAAGATGCTGCCACTTATTACTGCCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACACATCCAAACTGGCTTCTGGAGTCCCTGCTCGCTTCAGTGGCAGTGGGTCTGGGACCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /organism="unknown"
/mol_type="genomic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .807
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GI:33696534
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    76.4%;
85.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   patent US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 547.6; DB 6;
Pred. No. 6.2e-159;
0; Mismatches 106;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Iliades, P. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        807
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       807 bp
6562622.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Irving, R.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        17-AUG-2003
             541
                                                 489
                                                                                    481
                                                                                                                        429
                                                                                                                                                            421
                                                                                                                                                                                              369
                                                                                                                                                                                                                                361
                                                                                                                                                                                                                                                                    309
                                                                                                                                                                                                                                                                                                        301
                                                                                                                                                                                                                                                                                                                                            249
                                                                                                                                                                                                                                                                                                                                                                            241
                                                                                                                                                                                                                                                                                                                                                                                                                  189
                                                                                                                                                                                                                                                                                                                                                                                                                                                     181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
```

```
RESULT 1:
AF189283
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PUBMED
REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JOURNAL
MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                   CDS
                misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 source
                                               misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             670
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Synthetic construct chimeric single chain antibody 10B5 scFv mRNA, complete cds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Submitted (23-SEP-1999) Medical Countermeasures Section, Research Establishment Suffield, P.O. Box 4000, Station Medicine Hat, Alberta T1A 8K6, Canada Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Long, M.C., Jager, S., Mah, D.C.W., and Nagata, L.P.
Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       single-chain variable fragment antibody against Western equine
encephalitis virus
Hybridoma 19 (1), 1-13 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Construction and characterization of a novel recombinant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Long, M.C., Jager, S., Mah, D.C., and Nagata, L.P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   synthetic construct other sequences; artificial sequences.

1 (bases 1 to 1815)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AF189283.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AF189283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           10768836
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTTATTCTCTCACAATCAGCAGCATGGAGGCTGTAGATGCTGCCACTTATTACTGCCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACACATCCAAACTGGCTTCTGGAGTCCCTGCTTCAGTGGCAGTGGGTCTGGGACCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACTGGAGTAGTAACCCTCCCACGTTCGGTGCTGGGACCAAGCTGGAAATAAAACGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGCGGAGTAGTTACCCGCTCACGTTCGGTGCTGGGACACAGTTGGAAATAAAACGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTCACTCTCACAATCAGCAGCTTGGAGGCTGAAGATGCTGCCACTTATTACTGCCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACACATCCAAACTGGCTTCTGGAGTCCCTGCTCCGCTTCAGTGGCAGTGGGTCTGGGACCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (bases 1 to 1815)
                                                                                                                                        /codon_start=1
/trans[ table=11
/product="1085 scFv"
/protein_id="AAF42993.1"
/protein_id="AAF42993.1"
/db_xref="G1:7230486"
/fanslation="MRSGSHHHHHHGMASMTGGQQMGRDLYDDDDKDRWGSELEICSWY
HGIPLVVPFYAAQPAMAQVKLQQSGAELVKPGTSVKLSCXASGYNFTSYWINWVKLRP
GQELEWIGDIYPGSGSTMYNEKFKSKATLIVDTSSSTAYMQLSSLASEDSALYYCARG
DYGSSSFDYMGQGTTVTVSSGGGSGGGGSGGSDIELTGSPAIMAASPGEKVTITCS
DYGSSFDYMGQGTTVTSSGGGSGGGGSGGGSDIELTGSPAIMAASPGEKVTITCSSWEAE
DAGTYCQQRSSYPLTFGAGTKLEIKRAAAGCLVKDYPEPEVTYSWNSGALTSGVHTF
DAGTYCQQRSSYPLTFGAGTKLEIKRAAAGCLVKDYPEPEVTYSWNSGALTSGVHTF
                                                                             PAVLQSSĞLYSLSSVVTVPSSSLGTQTY I CNNMKRENTKVDKRVEPKSCDKTHTCPP
CPAPELIAGPSVFLT PPKRKDTLMI SRTPPVTCDVBHEDPBVKPMYVDGVEVVH
AKTKRREQYNSTYRVYSULTVLLQDMLNGKEYKCKVSNKALFAP I EKTI SKAKQOPR
EPQVYTLPPSRDELTKNQVSLTCLVKGFYPSDXAVEWESNGQPENNYKTTPPVLDSDG
                                                                                                                                                                                                                                                                                                                   end of the protein"
                                                                                                                                                                                                                                                                                                                                  /note="chimeric single chain fragment variable (scFv) antibody fused to the human heavy chain immunoglobulin gamma 1 constant domains (CH1-CH3, A 6 His tag and an enterokinase recognition site is present at the N-terminal
                  /note="Region: 913. .1812
                                                                SFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTHKA"
                                                                                                                                                                                                                                                                                                                                                                                                                               /mol_type="mRNA"
/db_xref="taxon:32630"
/cell_line="hybridoma expressing a monoclonal antibody
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               organism="synthetic construct"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GI:7230485
                                                                                                                                                                                                                                                                                                                                                                                                               recognizes Western
                               single chain fragment variable region'
   human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Jebailey,L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        JeBailey,L.,
                                                                                                                                                                                                                                                                                                                                                                                                                equine
                                                                                                                                                                                                                                                                                                                                                                                                                  encephalomyelitis virus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              linear SYN 23-MAR-2000 fragment variable
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mah,M.A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mah, M.A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Masri, S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Main,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Masri, S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Defence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        601
   REFERENCE
AUTHORS
TITLE
                                                                                                                                           LOCUS
DEFINITION
ACCESSION
                                                                              VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                         RESULT
A97142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              닭
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                á
                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORIGIN
                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                  á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                244
                                                                                                                                                                                                                                                           904
                                                                                                                                                                                                                                                                                        712
                                                                                                                                                                                                                                                                                                                        844
                                                                                                                                                                                                                                                                                                                                                       652
                                                                                                                                                                                                                                                                                                                                                                                    784
                                                                                                                                                                                                                                                                                                                                                                                                                                                     724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           633;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                             Sequence
A97142
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus 1 (bases 1 to 725) Petrul, H. and Bosslet, K. BONDING MOLECULES AGAINST RECEPTOR-LIGAND-COMPLEXES
                                                                                Mus sp.
                                                                                                                                A97142.1
                                                                                                                                                                              A97142
                                                                                                                                                                                                                                                           AAACGG
                                                                                                                                                                                                                                                                                          AAACGG
                                                                                                                                                               8
                                                                                                                                                                                                                                                           909
                                                                                                                                                                                                                                                                                        717
                                                                                                                                 GI:6780530
                                                                                                                                                               from Patent
```

```
1 CAGGTGAAACTGCAGCAGTCAGGACCTGAACTGGTGNAGCCTGGGGGCTTCAGTGAAGATA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCCTGCWAGGCTTCTGGCTACAACTTCACCAGCTACTGGATAAACTGGGTGAAGCTGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAGCAGAAGTTCAAGGGCAAGGCCACATTGACTGTAGACAAGTCCTCCAGCACAGCCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TCCTGCAAGACTTCTGGANACAAATTCACTGAATACACCATGCACTGGGTGAAGCAGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CAGGICAAGCIGCAGCAGICIGAGCIGAGCITGIGAAGCCIGGGACTICAGIGAAGCIG 243
TACTGTCAACAGAGGAGTAGTTATCCGCTCACGTTCGGAGCTGGGACAAAGTTGGAAATA
                       TACTGCCATCAGCGGAGTAGTTACCCGCTCACGTTCGGTGCTGGGACACAGTTGGAAATA
                                                                                 TCTGGGACCTCTTATTCTCTCACAATCAGCAGCATGGAGGCTGAAGATGCTGCCACTTAT
                                                                                                      TCTGGGACCTCTTATTCTCTCACAATCAGCAGCATGGAGGCTGTAGATGCTGCCACTTAT
                                                                                                                                                                  TGGATTTATGGCACATCCAACCTGGCTTCTGGAGTCCCTGTTCGCTTCAGTGGCAGTGGA
                                                                                                                                                                                        TGGATTTATGACACATCCAAACTGGCTTCTGGAGTCCCTGCTCCGCTTCAGTGGCAGTGGG
                                                                                                                                                                                                                                                 AGTATAAGTTCCAGCAACTTGCACTGGTACCAGCAGAAGTCAGAAACCTCCCCCAAACCC
                                                                                                                                                                                                                                                                               AGTATAAGTT----
                                                                                                                                                                                                                                                                                                                                 CCAGCAATCATGGCAGCATCTCCAGGGGAGAAGGTCACCATCACCTGCAGTGTCAGCTCA
                                                                                                                                                                                                                                                                                                                                                                 CCAGCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGGCAGCTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                          TACGGTAGTAGCTTTGACTACTGGGGCCAAGGGACCACGGTCACCGTCTCCTCAGGTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TACGGT--CCCGTTTGCTTACTGGGTCCAAGGGACCACGGTCACCGTCTCCTCAGGTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATGCAACTCAGCAGCCTGGCATCTGAGGACTCTGCTCTATTACTGTGCAAGAGGGGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATGGAGCTCCGCAGCCTGACATCTGAGGATTCTGCAGTCTATTACTGTGCAAGA-GATAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AATGAGAAGTTCAAGAGCAAGGCCACACTGATTGTAGACACATCCTCCAGCACGGCCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                  76.2%;
87.2%;
                                                                                                                                                                                                                                                                           -ACATGCACTGGTACCAGCAGAAGCCTGTCACCTCCCCCAAAAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 546; DB 12
Pred. No. 2e-158;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       83;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 1815;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             120
      903
                                            711
                                                                                                                            651
                                                                                                                                                                    783
                                                                                                                                                                                                               591
                                                                                                                                                                                                                                                                                            531
                                                                                                                                                                                                                                                                                                                                       663
                                                                                                                                                                                                                                                                                                                                                                              477
                                                                                                                                                                                                                                                                                                                                                                                                                    603
                                                                                                                                                                                                                                                                                                                                                                                                                                                               417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       303
                                                                                                                                                                                                                                                    723
```

725 bp : W09919361.

DNA

linear

PAT 26-JAN-2000

```
RESULT 14
CQ768808
LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                             맑
                                                                                      Ş
                                                                                                   밁
                                                                                                               S
                                                                                                                               음 성 음
                                                                                                                                                                   중 음 성
                                                                                                                                                                                                        음 성 음
                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                    5
                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                             뭐
                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                  á
                                                                                                                                                                                                                                                                                                                                                                                                                           ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local S
Matches 612
                                                                             673
                                                                                          665
                                                                                                      613
                                                                                                                   605
                                                                                                                               553
                                                                                                                                            545
                                                                                                                                                          493
                                                                                                                                                                       485
                                                                                                                                                                                    433
                                                                                                                                                                                                425
                                                                                                                                                                                                              373
                                                                                                                                                                                                                          365
                                                                                                                                                                                                                                       313
                                                                                                                                                                                                                                                    308
                                                                                                                                                                                                                                                                 253
                                                                                                                                                                                                                                                                             248
                                                                                                                                                                                                                                                                                          193
                                                                                                                                                                                                                                                                                                       188
                                                                                                                                                                                                                                                                                                                    133
                                                                                                                                                                                                                                                                                                                                 128
                                                                                                                                                                                                                                                                                                                                                                                                  al Similarity
612; Conserv
                        CQ768808
Sequence 27
CQ768808
CQ768808.1
                                                                                                                                                                                                                                                                                                                                              73
                                                                                                                                                                                                                                                                                                                                                          83
                                                                                                                                                                                                                                                                                                                                                                       13
                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Patent:
PETRUL H
synthetic construct
synthetic construct
other sequences; art
                                                                            ATTCTCTCACAATCAGCAGCATGGAGGCTGTAGATGCTGCCACTTATTACTGCCATCAGC
                                                                                                                                        CATCCAAACTGGCTTCTGGAGTCCCTGCTCGCTTCAGTGGCAGTGGGTCTGGGACCTCTT
                                                                                                                                                                                                             CAGGCGGAGGTGGCTCTGGCGGTGGCGGATCGAGCTCACCTCAGTCTCCAGCAA
                                                                                                                                                                                                                                                                                                 AGTTCAAGGGCAAGGCCACATTGACTGTAGACAAGTCCTCCAGCACAGCCTACATGGAGC
                                                                                                                                                                                                                                                                                                                            AGACTTCTGGANACAAATTCACTGAATACACCATGCACTGGGTGAAGCAGAGCCATGGAA
                                                                                                       ATTCTCTCACAATCAGCAGCATGGAGGCTGAAGATGCTGCCACTTATTACTGTCAACAGT
                                                                                                                                CATCCAACCTGGCTTCTGGAGTCCCCTTCTCGCTTCAGTGGCAGTGGGTCTGGGACCTTTT
                                                                                                                                                                                                                                                                                          AGTTCAAGGACAAGGTCACACTGACTGCAGACAAATCCTCCAACACAGCCTACATGCAGC
                                                                                                                                                                                                                                                                                                                    AGGCTTCTGGATACACATTCACTGACTATGTTATATCTTGGGTGAAGCAGAGAACTGGAC
                                                                                                                                                                                                                                                                                                                                                                                                75.5%;
nilarity 85.8%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 : WO 9919361-A 8 22-APR-1999;
HEIKE (CA); BOSSLET KLAUS (U
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="Mus sp."
/mol_type="unassigned DI
/db_xref="taxon:10095"
/tissue_type="MILZ"
                                       27
                                       from
                          GI:45112092
 artificial
                                                                                                                                                                                                                                                                                                                                                                                               Score 541.4; DB 6;
Pred. No. 5.2e-157;
0; Mismatches 98;
                                       811 bp DI
WO2004007550
веquenceв
                                                                                                                                                                                                                                                                                                                                                                                                                                              DNA"
                                             DNA
                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                             Length
                                             linear
                                             PAT
                                                                                                                                                                                                                                                                                                                                                                                                 υ
•
                                             04-MAR-2004
                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                          127
                                                                                                                                                          552
                                                                                                                                                                                    492
                                                                                                                                                                                                484
                                                                                                                                                                                                              432
                                                                                                                                                                                                                          424
                                                                                                                                                                                                                                                   364
                                                                                                                                                                                                                                                                              307
                                                                                                                                                                                                                                                                                                                    192
                                                                                                                                                                                                                                                                                                                                 187
                                                                                                                                                                                                                                                                                                                                              132
                                                                                                       672
                                                                                                                   664
                                                                                                                                612
                                                                                                                                             604
                                                                                                                                                                      544
                                                                                                                                                                                                                                                                                                                                                                       72
                                                                                                                                                                                                                                        372
                                                                                                                                                                                                                                                                312
                                                                                                                                                                                                                                                                                          252
                                                                                                                                                                                                                                                                                                       247
RESULT 15
CQ802042
                                                           Ś
                          8 8
                                                  밁
                                                                            밁
                                                                                    Ś
                                                                                                  멍
                                                                                                               δ
                                                                                                                               g
                                                                                                                                        S
                                                                                                                                                      밁
                                                                                                                                                                   S
                                                                                                                                                                                    밁
                                                                                                                                                                                            Ş
                                                                                                                                                                                                             밁
                                                                                                                                                                                                                        á
                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                        á
```

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local S
Matches 624
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
JOURNAL
                                                                                              591
                                                                                                                    541
                                                                                                                                       531
                                                                                                                                                                                                                                           361
                                                                                                                                                                                                                                                                                  301
                                      661
                                                         651
                                                                             601
                                                                                                                                                           481
                                                                                                                                                                              471
                                                                                                                                                                                                  421
                                                                                                                                                                                                                      411
                                                                                                                                                                                                                                                             357
                                                                                                                                                                                                                                                                                                    297
                                                                                                                                                                                                                                                                                                                        241
                                                                                                                                                                                                                                                                                                                                           246
                                                                                                                                                                                                                                                                                                                                                                181
                                                                                                                                                                                                                                                                                                                                                                                   186
                                                                                                                                                                                                                                                                                                                                                                                                       121
721
                 711
                                                                                                                                                                                                                                                                                                                                                                                                                          126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             624;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Unger, C.M., Zehe
Beste, G.
Mcam inhibitors
                                                                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     щ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Patent:
Xerion F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           h 75.2%;
Similarity 86.2%;
24; Conservative
 GAAA
                                                                            TTACTGCCATCAGCGGAGTAGTTACCCGCTCACGTTCGGTGCTGGGACACAGTTGGAAAT
                                                                                                                                                                       CAGCTCAAGTATAAGTTACATGCACTGGTACCAGCAGAAGCCTGTCACCTCCCCCCAAAAG
                                                                                                                                                                                                                                          AGGCGGTTCAGGCGGAGGTGGCTGGCGGGGGGGGAGTGCACTCCAAATTGTTCTCAC
                                                                                                                                                                                                                                                                                AAAA
                                                                                                                     ATGGATTTATGACACATCCAAACTGGCTTCTGGAGTCCCTGCTCGCTTCAGTGGCAGTGG
                                                                                                                                ATGGATTTATGACACATCCAAACTGGCTTCTGGAGTCCCCTGCTCCGCTTCAGTGGCAGTGG
                                                                                                                                                            CAGCTCAAGTGTAAGTTACATGCACTGGTACCAGCAGAAGTCAGGCACCTCCCCAAAAG
                                                                                                                                                                                                                                                     AGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCGGATCGG-----ACATCGAGCTCAC
                                                                                                                                                                                                                                                                                                                         GCTCCGCAGCCTGACATCTGAGGACTCTGCAGTCTATTACTGTGTAAAAATGGGGGTACGA
                                                                                                                                                                                                                                                                                                                                    GCTCCGCAGCCTGACATCTGAGGATTCTGCAGTCTATTACTGTGCAAGA-----GA
                                                                                                                                                                                                                                                                                                                                                                                                       AAAGAGCCTTGAGTGGATTGGATATGTTTATCCTTACAATGGTGATACTGGCTACAACCA
                                                                                                                                                                                                                                                                                                                                                                                                                  CAAGGCTTCTGGATACACATTCACTGACTACAACATGCACTGGCTGAAGCGGAGCCATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                           CAAGACTTCTGGANACAAATTCACTGAATACACCATGCACTGGGTGAAGCAGAGCCATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            : WO 2004007550-A 27 2
Pharmaceuticals GmbH
Location/Qualifiers
                   714
 724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="synthetic composition of /mol_type="unassigned I/db_xref="taxon:32630" /note="Description of /
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Zehetmeier, C.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 539.2; DB 6;
Pred. No. 2.6e-156;
0; Mismatches 85;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         22-JAN-2004;
f (DE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Torella, C.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                construct"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Artificial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Niewoehner
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ū.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ahrens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  œ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ٠.
                                                          710
                                                                                                                                                                                                                                                          410
                                                                                                                                                                                                                                                                                                                                                                                                       180
                                                                              660
                                                                                                 650
                                                                                                                    600
                                                                                                                                        590
                                                                                                                                                           540
                                                                                                                                                                                                   480
                                                                                                                                                                                                                       470
                                                                                                                                                                                                                                           420
                                                                                                                                                                                                                                                                                  360
                                                                                                                                                                                                                                                                                                                         300
                                                                                                                                                                                                                                                                                                                                            296
                                                                                                                                                                                                                                                                                                                                                                240
                                                                                                                                                                                                                                                                                                                                                                                   245
                                                                                                                                                                                                                                                                                                                                                                                                                           185
                                                                                                                                                                                                                                                                                                                                                                                                                                               120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         53
                                                                                                                                                                              530
                                                                                                                                                                                                                                                                                                     356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2
```

```
LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                     Ś
                                                                                                   밁
                                                                                                                                                          밁
                                                                                                                                                                                  S
                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                        5
                á
                                           В
                                                                                                                            δ
                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                               뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            source
                 651
                                            601
                                                                       591
                                                                                                   541
                                                                                                                               531
                                                                                                                                                          481
                                                                                                                                                                                       471
                                                                                                                                                                                                                    421
                                                                                                                                                                                                                                              411
                                                                                                                                                                                                                                                                            361
                                                                                                                                                                                                                                                                                                                                 301
                                                                                                                                                                                                                                                                                                       357
                                                                                                                                                                                                                                                                                                                                                              297
                                                                                                                                                                                                                                                                                                                                                                                          241
                                                                                                                                                                                                                                                                                                                                                                                                                     246
                                                                                                                                                                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               624;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       synthetic
synthetic
other sequ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       سا
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Unger,C.M., Beste,G., Jensen,K.H., Zehetmeier,C., Knauer,R., Guelbenzu,B.L., Torella,C. and Ilag,L.L.
Proteomic screen to identify disease-related biological moleculesand inhibitors thereto
Patent: WO 2004007717-A 27 22-JAN-2004;
Xerion Pharmaceuticals AG (DE)
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 27 from Patent CQ802042 CQ802042.1 GI:47058596
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GAAACTGCAGCAGTCAGGACCTGAACTGGTGNAGCCTGGGGCTTCAGTGAAGATATCCTG
TTACTGCCATCAGCGGAGTAGTTACCCGCTCACGTTCGGTGCTGGGACACAGTTGGAAAT
                                                            GTCTGGGACCTCTTATTCTCTCACAATCAGCAGCATGGAGGCTGTAGATGCTGCCACTTA 650
                                                                                                                     ATGGATTTATGACACATCCAAACTGGCTTCTGGAGTCCCTGCTCCGCTTCAGTGGCAGTGG
                                                                                                                                                                                                                                                                                                                                                                                                       GCTCCGCAGCCTGACATCTGAGGATTCTGCAGTCTATTACTGTGCAAGA-----GA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                GAAGTTCAAGGGCAAGGCCACATTGACTGTAGACAAGTCCTCCAGCACAGCCTACATGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CAAGGCTTCTGGATACACATTCACTGACTACAACATGCACTGGCTGAAGCGGAGCCATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CAAGACTTCTGGANACAAATTCACTGAATACACCATGCACTGGGTGAAGCAGAGCCATGG
                                                                                                    ATGGATTTATGACACATCCAAACTGGCTTCTGGAGTCCCTGCTCGCTTCAGTGGCAGTGG
                                                                                                                                                          CAGCTCAAGTGTAAGTTACATGCACTGGTACCAGCAGAAGTCAGGCACCTCCCCCAAAAG
                                                                                                                                                                             CAGCTCAAGTATAAGTTACATGCACTGGTACCAGCAGAAGCCTGTCACCTCCCCCAAAAG
                                                                                                                                                                                                                  CCAGTCTCCAGCCATCACAGCTGCATCTCTGGGGCAAAAGGTCACCATCACCTGCAGTGC
                                                                                                                                                                                                                                                                                                                                 CGTGGCGTGGTACTTCGATGTCTGGGGGCGCAGGGACCACGGTCACCGTGTCGACAGGTGG
                                                                                                                                                                                                                                                                                                                                                            TACTACGGTCCCGTTTGCTTACTGGGTCCAAGGGACCACGGTCACCGTCTCCTCAGGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                               GAAGTTCAAGACCAAGGCCACATTGACTGTAGACAATTCCTCCAGCACAGCCTACATGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAAGAGCCTTGAGTGGATTGGATATGTTTATCCTTACAATGGTGATACTGGCTACAACCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCAGCTGAAGGAGTCAGGACCTGAGCTGGTGAAACCTGGGGCCTCAGTGAAGATATCCTG
                                           GTCTGGGACCTCTTACTCTCACAATCAGCAGCATGGAGGCTGAAGATGCTGCCACTTA
                                                                                                                                                                                                                                             TCAGTCTCCAGCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGG 470
                                                                                                                                                                                                                                                                         AGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCGGAAGTGCACTCCAAATTGTTCTCAC
                                                                                                                                                                                                                                                                                                       AGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCGGATCGG-----ACATCGAGCTCAC
                                                                                                                                                                                                                                                                                                                                                                                        GCTCCGCAGCCTGACATCTGAGGACTCTGCAGTCTATTACTGTGTAAAATGGGGGTACGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            75.2%; ilarity 86.2%; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       sequences; artificial sequences.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="synthetic construct"
/mol_type="unassigned DNA"
/db xref="taxon:22630"
/noTe="Description of Artificial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            . .811
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         from Patent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 539.2; DB 6;
Pred. No. 2.6e-156;
0; Mismatches 85;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         811 bp DNA
WO2004007717.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence: scFv"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       811;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PAT 05-MAY-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                     410
                                                                                                                                                                                                                                                                                                                                                                                        300
                                                                                                                                                                                                                                                                                                                                                                                                                                               240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           245
                                                                                                                                                                                                                    480
                                                                                                                                                                                                                                                                                                                                 360
                                                                                                                                                                                                                                                                                                                                                            356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           125
                                            660
                                                                                                   600
                                                                                                                               590
                                                                                                                                                          540
                                                                                                                                                                                      530
                                                                                                                                                                                                                                                                         420
                                                                                                                                                                                                                                                                                                                                                                                                                     296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2
```

Db 661 TTACTGCCAGCAGTGGAGTAGTAACCCACTCACGTTCGGTGCTGGGACCAAGCTGGAGCT 720

Qy 711 AAAA 714

| | | |
Db 721 GAAA 724

Search completed: February 18, Job time: 3234.76 secs

2005, 22:25:56

Tue

Feb

22

13:21:04 2005

```
Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Run
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 s
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Maximum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Minimum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Total number
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OM nucleic -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pred. No. is the score greater that and is derived
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          88
           703 593.4
593.4
593.4
593.4
593.4
593.6
574
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.4
561.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  derived
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              nucleic search, using
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   N Geneseq_16Dec04:*

1: geneseqn1980s:*
2: geneseqn1990s:*
3: geneseqn2000s:*
4: geneseqn2001as:*
6: geneseqn2002as:*
7: geneseqn2002as:*
9: geneseqn2002bs:*
9: geneseqn2003bs:*
11: geneseqn2003ds:*
12: geneseqn2004as:*
13: geneseqn2004as:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query
Match Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          is the number of results predicted by chance to have a ster than or equal to the score of the result being printed, rived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IDENTITY_NUC Gapop 10.0 ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         February 18, 2005, 18:34:54; Search time 419.878 Seconds (without alignments) 10108.771 Million cell updates
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4390206 seqs, 2959870667 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-10-075-947A-1
717
       999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
999.7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           caggtgaaactgcagtc.....cacagttggaaataaaacgg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Copyright
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               geneseqn2003cs:*
geneseqn2003ds:*
geneseqn2004as:*
geneseqn2004bs:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GenCore version 5.1.6 (c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gapext 1.0
       3 ADT91206
AAZ28963
ADS08281
AAX56760
AAF6151
AAH26790
AAH26791
AAD42824
                                                                                                                                                                                                                                                                                                                                             AAF61510
ADT91212
ADC79233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ABA92026
AAT86311
AAC85539
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACC83315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ħ
                                                                                                                                                                                                                                                                                                              ACC83314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAT86309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ADJ88112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADT91208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SUMMARIES
Aa151099 Human neu
Adj88112 Human bet
Acc83315 Single ch
Adt91208 Single ch
Aaft91208 Single ch
Aaft91212 Single ch
Adt91212 Single ch
Adc9233 VK-8-1.9
Acc83314 Single ch
Adc9203 Nnti-Hepa
Ads08281 Human ant
Aax56760 Mouse scr
Aaf61511 DNA encod
Aah26791 Anti-p53
Aah42824 KDR bindi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Aat86309 Single ch
Aba92026 Anti-disi
Aat86311 Single ch
Aac85539 scFv 508F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                cell updates/sec
```

	45	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21
	502.8	502.8	502.8	503	503.6	504	504	504.6	504.6	507.2	508	512	512.6	515	515.8	515.8	517.4	517.4	517.8	520.4	520.6	521.6	521.8	523.2	523.8
	70.1	70.1	70.1	70.2	70.2	70.3	70.3	70.4	70.4	70.7	70.9	71.4	71.5	71.8	71.9	71.9	72.2	72.2	72.2	72.6	72.6	72.7	72.8	73.0	73.1
	1479	1479	1479	732	2478	1673	1673	732	732	810	723	810	726	843	720	719	1797	1797	2364	732	726	726	850	714	894
	12	12	12	N	N	4.	4	N	N	N	10	13	N	10	4	w	w	N	N	N	N	N	10	0	N
,	ADQ91089	ADQ91105	ADQ91091	AAT04021	AAX86614	ABK49930	ABK52599	AAT04026	AAT04020	AAQ90663	ADD31765	ADS17526	AAT04024	AAD50925	AAC60427	AAA60938	AAA10398	AAV00687	AAV23580	AAV23579	AAT04025	AAT04023	ACC57515	AAD42825	AAX33931
	Adq91089 Antibody	Adq91105 Antibody	Adq91091 Antibody	Aat04021 Anti-EGFR	Aax86614 cDNA enco	Abk49930 DNA encod	Abk52599 DNA encod	Aat04026 Anti-EGFR	Aat04020 Anti-EGFR	Aaq90663 MFE-23 an	Add31765 Anti-CEA	Ads17526 Nucleotid	Aat04024 Anti-EGFR	Aad50925 12E antib	Aac60427 Anti-TAC	Aaa60938 Anti-TAC	Aaa10398 Recombina	Aav00687 Fusion ge	Aav23580 Antibody-	Aav23579 Firefly 1	Aat04025 Anti-EGFR	Aat04023 Anti-EGFR	Acc57515 Costimula	Aad42825 KDR bindi	Aax33931 HBV speci

## ALIGNMENTS

RESULT 1
AAT66309
ID AAT66309
ID AAT66309
AC AAT6
XX AAT6
XX AAT6
XX AAT6
XX AAT6
XX AAT6
XX ProXX P 20-MAR-1997; Synthetic pro-drug converting Antibody construct; disialoganglioside; GD2; single chain Fv fragment; scFv; tumour; neuroblastoma; osteosarcoma; soft tissue sarcoma; tissue imaging; target delivery; toxin; streptavidin; Single chain anti-disialoganglioside GD2 antibody 5F11-scFv. 06-APR-1998 AAT86309 standard; DNA; 717 20-MAR-1996; 25-SEP-1997. WO9734634-A1. AAT86309; (SLOK ), SLOAN KETTERING INST CANCER RES. (first entry) 96US-0013703P 97WO-US004427. enzyme; GD2-targeted lymphocyte; ss 쁂

The present sequence encodes a recombinant single chain peptide, 5F11-scFv. The peptide is an antibody construct comprising the variable regions of the heavy and light chains of an antibody against disialoganglioside (GD2) as a single chain Fv fragment (scFv). GD2 occur many tumours types including neuroblastoma, osteosarcomas and other soft tissue sarcomas, medulloblastomas, high grade astrocytomas,

GD2 occurs

Disclosure; Page 11; 31pp; English.

toxins, to such cells.

Recombinant single chain anti-disialoganglioside GD2 antibody -detect tumour cells expressing GD2 and to target therapeutic age

ly - useful : agents, e.

.6.

Cheung NV, Larson SM,

Guo H,

Rivlin K,

Sadelain

WPI; 1997-479996/44.

និង្គិន្តិនិង្គិន្តិនិង្គិន្តិ

Ş

```
RESULT 2
ABA92026
ID ABA9
XX
AC ABA9
DT 23-N
XX
DE Anti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query
Best 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 melanomas and small cell lung cancer. The peptide can be detectably labelled, preferably with 99m-Tc, for tissue imaging of cells expressing GD2. It can also be used to target delivery of a therapeutic or pretherapeutic agent, such as a toxin, streptavidin or a pro-drug converting enzyme, to cells expressing GD2. The peptide may further comprise CD8 to facilitate the formation of GD2-targeted lymphocytes. T cells containing
               Anti-disialoganglioside GD2 single chain antibody 5F11 scFv
                                                      23-MAY-2002
                                                                                                                            ABA92026
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  peptide can also be used to target GD2-producing tumour cells
                                                                                                                                                                                                                    661
                                                                                                                                                                                                                                                        661
                                                                                                                                                                                                                                                                                          601
                                                                                                                                                                                                                                                                                                                                                                541
                                                                                                                                                                                                                                                                                                                                                                                                                                       481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cal Similarity
717; Conserv
                                                                                                                                                                                                                                                                                                                            601
                                                                                                                                                                                                                                                                                                                                                                                                 541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CAGGTGAAACTGCAGCAGTCAGGACCTGAACTGGTGNAGCCTGGGGCTTCAGTGAAGATA
                                                                                                                            standard;
                                                                                                                                                                                                                                         CAGCGGAGTAGTTACCCGCTCACGTTCGGTGCTGGGACACAGTTTGGAAATAAAACGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATAAGTTACATGCACTGGTACCAGCAGAAGCCTGTCACCTCCCCCAAAAGATGGATTTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGGCAGCTCAAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATGGAGCTCCGCAGCCTGACATCTGAGGATTCTGCAGTCTATTACTGTGCAAGAGATACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCCTGCAAGACTTCTGGANACAAATTCACTGAATACACCATGCACTGGGTGAAGCAGAGC
                                                                                                                                                                                                                    CAGCGGAGTAGTTACCCGCTCACGTTCGGTGCTGGGACACAGTTGGAAATAAAACGG
                                                                                                                                                                                                                                                                                                                                                                GACACATCCAAACTGGCTTCTGGAGTCCCTGCTCGCTTCAGTGGCAGTGGGTCTGGGACC
                                                                                                                                                                                                                                                                                                                                                                                                   GACACATCCAAACTGGCTTCTGGAGTCCCTGCTCGCTTCAGTGGCAGTGGGTCTGGGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGGCAGCTCAAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACGGTCCCGTTTGCTTACTGGGTCCAAGGGACCACGGTCACCGTCTCACGTGGAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACGGTCCCGTTTGCTTACTGGGTCCAAGGGACCACGGTCACCGTCTCCCTCAGGTGGAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATGGAGCTCCGCAGCCTGACATCTGAGGATTCTGCAGTCTATTACTGTGCAAGAGATACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAGCAGAAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAGCAGAAGTTCAAGGGCAAGGCCACATTGACTGTAGACAAGTCCTCCAGCACAGCCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCCTGCAAGACTTCTGGANACAAATTCACTGAATACACCATGCACTGGGTGAAGCAGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CAGGTGAAACTGCAGCAGTCAGGACCTGAACTGGTGNAGCCTGGGGGCTTCAGTGAAGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                717 BP; 180 A; 181 C; 195 G; 159 T; 0
                                                                                                                                                                                                                                                                                        TCTTATTCTCTCACAATCAGCAGCATGGAGGCTGTAGATGCTGCCACTTATTACTGCCAT
                                                                                                                                                                                                                                                                                                                        TCTTATTCTCTCACAATCAGCAGCATGGAGGCTGTAGATGCTGCCACTTATTACTGCCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                     ATAAGTTACATGCACTGGTACCAGCAGAAGCCTGTCACCTCCCCCAAAAGATGGATTTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                    (first entry)
                                                                                                                          CDNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     99.7%; but
100.0%; Pr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCAAGGGCAAGGCCACATTGACTGTAGACAAGTCCTCCAGCACAGCCTAC
                                                                                                                            717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 715; DB 2; L
Pred. No. 1.1e-192;
                                                                                                                            ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                U; 2 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 717;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ç,
                                                                                                                                                                                                                  717
                                                                                                                                                                                                                                                      717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              300
                                                                                                                                                                                                                                                                                                                                                                                                600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    420
                                                                                                                                                                                                                                                                                                                                                              600
                                                                                                                                                                                                                                                                                                                                                                                                                                   540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
```

Ş 망

밁

В δ 밁 δ 밁 Ś 밁 8 밁

ঠ

S 밁

밁

δ

ATGGAGCTCCGCAGCCTGACATCTGAGGATTCTGCAGTCTATTACTGTGCAAGAGATACT

300 300 뭐 Š

Ş

ঠ 멍 Ś

В

```
문
                           Ş
                                                              문
                                                                                       5
                                                                                                                           문
                                                                                                                                                        S
                                                                                                                                                                                        밁
                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                   Query Match
Best Local S
Matches 717
                                                                                                                                                                                                                                                                                                                                                            the construction of the present SF11 scFV gene using a mouse scFV module/recombinant phage antibody system. The scFV can be used in fusion proteins of the invention which comprise an scFV antibody linked to the human T cell surface receptor CD28. T cells expressing such fusion proteins exhibit enhanced survival when reintroduced to an in vivo environment. They can be used to induce an immune response to cells that express the antigen to which the antibody is specific. Cells expressing a fusion protein including an anti-GD2 scFV are useful for treatment of melanomas, neuroblastomas, small lung carcinoma, sarcomas and brain tumours that express GD2 as a surface antigen. Cells expressing the fusion proteins of the invention can also be used for in vitro purging of stem cells or bone marrow and for in vivo targeting of tumour cells and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The present sequence is that of cDNA encoding a single chain scFv antibody that is derived from an anti-disialoganglioside GD2 antibody produced by SF11 hybridoma cells. The scFv comprises the SF11 variable chains in VH-VL orientation. mRNA from SF11 hybridoma cells was used
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  New fusion protein, useful for inducing host immune response, comprises variable region of light chain of an antibody linked to variable region of antibody, CD28 receptor signaling domain and transmembrane domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Single chain antibody; scFv; antibody; disialoganglioside GD2; antitumour; immunostimulant; neuroblastoma; melanoma; sarcoma; small lung carcinoma; brain tumour; cancer; therapy; imaging;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI;
                                                                                                                                                                                                                                                                                                                 Sequence 717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (SADE/)
(CHEU/)
(KRAU/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Disclosure; Page 3; 9pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sadelain M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        30-SEP-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US2002018783-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (GUOH/)
                               181
                                                              121
                                                                                             121
                                                                                                                                                                                                                                                      717;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2002-239251/29
                                                                                                                                                                                                                                                                                                                                                antigen-bearing cells for imaging
                                                                                                                            61
                                                                                                                                                          61
                                                                                                                                                                                                          1 CAGGTGAAACTGCAGCAGTCAGGACCTGAACTGGTGNAGCCTGGGGCTTCAGTGAAGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SADELAIN M.
CHEUNG N V.
KRAUSE A.
GUO H.
                                                                                                                                                                                                                                                                      Similarity
                  AAGCAGAAAGTTCAAGGGCAAAGGCCACATTGACTGTAGACAAGTCCTCCAGCACAGCCTAC
                                                                TCCTGCAAGACTTCTGGANACAAATTCACTGAATACACCATGCACTGGGTGAAGCAGAGC
                                                                                                                                             TCCTGCAAGACTTCTGGANACAAATTCACTGAATACACCATGCACTGGGTGAAGCAGAGC
                                                                                                                                                                                         CAGGTGAAACTGCAGCAGTCAGGACCTGAACTGGTGNAGCCTGGGGCTTCAGTGAAGATA
 AAGCAGAAGTTCAAGGGCAAGGCCACATTGACTGTAGACAAGTCCTCCAGCACAGCCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Cheung
                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                 BP; 180 A; 181 C; 195 G; 159 T; 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           97WO-US004427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        97US-00940544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                     99.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Krause
                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                     Score 715;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A,
                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Guo
                                                                                                                                                                                                                                                                     1.1e-192;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ξ
                                                                                                                                                                                                                                                                                     DB 6;
                                                                                                                                                                                                                                                        0,
                                                                                                                                                                                                                                                                                                                   U; 2
                                                                                                                                                                                                                                                                                  Length 717
                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                    Other;
                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   gene;
                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     88.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ä
                                                                                                                                                             120
                                                                                                                                                                                             60
 240
                                240
                                                                 180
                                                                                             180
                                                                                                                              120
                                                                                                                                                                                                                                                                                                                                                                                   o
f
```

Ω

```
ARESULT 3
ANTB611
ID ANTB
XX ANTB
XX ANTB
XX ANTB
XX Sing
XX Sing
XX Eise
XX E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ર્
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      멂
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                         misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAT86311 standard;
                                                                                                                                                                                                                                  20-MAR-1997;
                                                                                                                                                                                                                                                                                                                            W09734634-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      scFv; tumour; neuroblastoma; osteosarcoma; soft tissue sarcoma;
tissue imaging; target delivery; toxin; streptavidin;
pro-drug converting enzyme; GD2-targeted lymphocyte; ss.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Single chain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           06-APR-1998
Recombinant single chain anti-disialoganglioside GD2 antibody - useful
                                                WPI; 1997-479996/44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Antibody construct; disialoganglioside; GD2; single chain Fv
                                                                                                                                                                                      20-MAR-1996;
                                                                                                                                                                                                                                                                                  25-SEP-1997
                                                                                                                                            (SLOK ) SLOAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   301
                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TCTTATTCTCTCACAATCAGCAGCATGGAGGCTGTAGATGCTGCCACTTATTACTGCCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GACACATCCAAACTGGCTTCTGGAGTCCCTGCTCCGCTTCAGTGGCAGTGGGTCTGGGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATAAGTTACATGCACTGGTACCAGCAGAAGCCTGTCACCTCCCCCAAAAGATGGATTTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGGCAGCTCAAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGGCAGCTCAAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CAGCGGAGTAGTTACCCGCTCACGTTCGGTGCTGGGACACAGTTGGAAATAAAACGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GACACATCCAAACTGGCTTCTGGAGTCCCTGCTCGCTTCAGTGGCAGTGGGTCTGGGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATAAGTTACATGCACTGGTACCAGCAGAAGCCTGTCACCTCCCCCAAAAAGATGGATTTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACGGTCCCCGTTTGCTTACTGGGTCCAAGGGACCACGGTCACCGTCTCCCTCAGGTGGAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACGGTCCCGTTTGCTTACTGGGTCCAAGGGACCACGGTCACCGTCTCCTCAGGTGGAGGC
                                                                                            Larson
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        anti-disialoganglioside GD2 antibody 5F11-scFv-streptavidin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                                                            KETTERING INST CANCER
                                                                                                                                                                                      96US-0013703P
                                                                                                                                                                                                                                    97WO-US004427
                                                                                                                                                                                                                                                                                                                                                                                                                        /*tag= b
/note= "linker
741. .1175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note= "encodes single chain Fv fragment of antibody 5F11" 717. .740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DNA;
                                                                                            SM,
                                                                                                                                                                                                                                                                                                                                                                          "encodes streptavidin"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1175
                                                                                            Guo
                                                                                            Ŧ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                              sequence'
                                                                                            Rivlin
                                                                                            ᄌ
                                                                                            Sadelain
                                                                                              3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            fragment;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             600
    ö
    문
```

```
detect tumour cells expressing GD2 toxins, to such cells.
                                                                          and
                                                                          to target therapeutic agents, e.g
```

Page 12; 31pp; English

CC The present sequence encodes a recombinant single chain peptide, 5F11-CC scFv-streptavidin. The peptide is an antibody construct comprising the CC variable regions of the heavy and light chains of an antibody against CC disialoganglioside (GD2) as a single chain Fv fragment (scFv). GD2 occurs CC in many tumours types including neuroblastoma, osteosarcomas and other CC soft tissue sarcomas, medulloblastomas, high grade astrocytomas, CC melanomas and small cell lung cancer. The peptide can be detectably CC labelled, preferably with 99m-Tc, for tissue imaging of cells expressing CC GD2. It can also be used to target delivery of a therapeutic or precent aproducing converting enzyme, to cells expressing CC or a pro-drug converting enzyme, to cells expressing CC or a pro-drug converting enzyme, to cells expressing GD2. The peptide may CC further comprise CD8 to facilitate the formation of GD2-targeted CC lymphocytes. T cells containing the peptide can also be used to target CC GD2-producing tumour cells

Sequence 1175 BP; 276 A; 346 C; 330 G; 221 T; 0 U; 2 Other;

δ 밁 á 밁 S 밁 Ś 밁 ş 밁 S 밁 Ś 밁 Ś 밁 S 밁 S 밁 S 밁 ફ Query Match Best Local Matches 716; Conservative 601 541 541 481 421 421 361 361 301 301 241 241 181 181 121 661 109 481 121 61 61 1 CAGGTGAAACTGCAGCAGTCAGGACCTGAACTGGTGNAGCCTGGGGCTTCAGTGAAGATA Similarity GACACATCCAAACTGGCTTCTGGAGTCCCTGCTCGCTTCAGTGGCAGTGGGTCTGGGACC CAGCGGAGTAGTTACCCCGCTCACGTTCGGTGCTGGGACACAGTTGGAAATAAAACGG ATAAGTTACATGCACTGGTACCAGCAGAAGCCTGTCACCTCCCCCAAAAGATGGATTTAT GCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGGCAGCTCAAGT TCCTGCAAGACTTCTGGANACAAATTCACTGAATACACCATGCACTGGGTGAAGCAGAGC TCTTATTCTCTCACAATCAGCAGCATGGAGGCTGTAGATGCTGCCACTTATTACTGCCAT GCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGGCAGCTCAAGT ACGGTCCCGTTTGCTTACTGGGTCCAAGGGACCACGGTCACCGTCTCCTCAGGTGGAGGC ATGGAGCTCCGCAGCCTGACATCTGAGGATTCTGCAGTCTATTACTGTGCAAGAGATACT AAGCAGAAGTTCAAGGGCAAGGCCACATTGACTGTAGACAAGTCCTCCAGCACAGCCTAC ATAAGTTACATGCACTGGTACCAGCAGAAGCCTGTCACCTCCCCCAAAAGATGGATTTAT ACGGTCCCGTTTGCTTACTGGGTCCAAGGGACCACGGTCACCGTCTCCTCAGGTGGAGGC ATGGAGCTCCGCAGCCTGACATCTGAGGATTCTGCAGTCTATTACTGTGCAAGAGATACT AGCAGAAGTTCAAGGGCAAGGCCACATTGACTGTAGACAAGTCCTCCAGCACAGCCTAC CAGGTGAAACTGCAGCAGTCAGGACCTGAACTGGTGNAGCCTGGGGCTTCAGTGAAGATA 98.0%; .. Score 703; DB 2; Pred. No. 3.5e-189; 0; Mismatches 0; 0 Length 1175 Indels ; Gaps 717 180 659 660 600 600 540 540 480 480 420 420 360 360 300 300 240 240 180 120 120 60 60

```
RESULT 4

AAC85539

ID AAC85539

AAC85539

AAC86583

AX AAC8

AAC8

AX AAC8

A
                               Ş
                                                                                                                                                                                                                                            This sequence encodes scFv 508F heavy chain, linker and light chain. The CC scFv fragment was derived from the 508 IgM hybridoma which is generated cf from splenocytes of a mouse that has been immunised with a peptide CC corresponding to the 16 amino terminal residues of beta-Ap conjugated to CC keyhole limpet hemocyanin used a carrier. The resultant variable chain CC fragments may be used in the method of the invention. Cys 96 of the VL CC fragment was replaced with various amino acids to see if production yield CC or stability were effected without having an adverse effect on its CC binding affinity. The invention provides an agent for treating a plaque CC vehicle and are capable of eliciting antibodies capable of disaggregating CC the aggregating protein and/or of preventing aggregation of the CC aggregating protein and/or of preventing aggregation of the CC disease, late onset Alzheimer's diseases, e.g. early onset Alzheimer's CC disease, SAA amyloidosis, hereditary Icelandic syndrome, senility, CC multiple myeloma, scrapie, bovine spongiform encephalopathy (BSE), kuru, CC (GSS) and fatal familial insomnia (FFI)
                                                                                      Query Match
Best Local S
Matches 646
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              03-SEP-1999;
29-DEC-1999;
31-JUL-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human, prion protein; plaque forming disease; display vehicle; kuru; aggregating protein; amyloid plaque; brain; early conset; senility; Alzheimer's disease; late onset; pre-symptomatic; SAA amyloidosis; hereditary Icelandic syndrome; multiple myeloma; scrapie; BSE; CJD; bovine spongiform encephalopathy; Creutzfeldt-Jakob Disease; FFI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Treating amyloidgenic disease such as Alzheimer's disease, BSE on comprises presentation of plaque derived antigens or epitopes on display vehicle, and introducing the vehicle into the recipient.
                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Example
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Solomon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         31-AUG-2000; 2000WO-IL000518
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WO200118169-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              antibody;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gerstmann-Streussler-Sheinker Disease; GSS; fatal familial insomnia,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             04-JUN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAC85539;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAC85539 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (UYRA-) UNIV RAMOT APPLIED RES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2001-244564/25.
                                                                                         646;
                                     μ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В,
                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAB47111.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2; Fig 11; 120pp; English
CAGGTGAAACTGCAGCAGTCAGGACCTGAACTGGTGNAGCCTGGGGCTTCAGTGAAGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   coding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 88
                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Frenkel
                                                                                                                                                                                                   ВP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2000US-00629971
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        99US-0152417P.
99US-00473653.
                                                                                                                                                                                                   178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ď
                                                                                                             82.8%;
                                                                                                                                                                                                A;
                                                                                                                                                                                                   174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Hanan
                                                                                                                                                                                                C;
                                                                                      0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ₽P
                                                                                                                   Score 593.4;
Pred. No. 4e
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ŗ٦
                                                                                                                                                                                                198 G; 167
                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ij
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEV
                                                                                                                   4e-158;
                                                                                                                                                BB
                                                                                                                                                                                                T; 0 U;
                                                                                      68;
                                                                                                                                          4
                                                                                                                                                                                                0 Other;
                                                                                                                                          Length
                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BSE or
                                                                                   ω
•
                                                                                      Gaps
                                  6
```

15-MAR-2001;

2001US-00808037

```
RRESULT 5
AAL5109
ID AAL5
XX
AAC AAL5
XX
AC AAL5
XX
DT 27-F
CAC
DT 27-F
CAC
DT 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             멼
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                Gene; ds; vaccine; gene therapy; neurological disease; CNS disorder; central nervous system disorder; olfactory system; Alzheimer's disease; Creutzfeld-Jakob disease; Huntington's chorea; Parkinson's disease; viral infection of the brain; brain tumour; lysosomal storage disease;
                                                                                                                                                                                                                                         Homo
                                                                                                                                                                                                                                                                                        multiple sclerosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human neurological/CNS disease treatment method-related
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           27-FEB-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAL51099
                                                                            15-MAR-2002; 2002WO-US008042
                                                                                                                                                                                       WO200274243-A2
                                                                                                                                                                                                                                         sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCCTGCAAGACTTCTGGANACAAATTCACTGAATACACCATGCACTGGGTGAAGCAGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CATCAGCGGAGTAGTTACCCATTCACGTTCGGAGGGGGGGCCAAGCTGGAAATAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CATCAGCGGAGTAGTTACCCGCTCACGTTCGGTGCTGGGACACAGTTGGAAATAAAA 714
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCTCTTATTCTCTCACAATCAGCAGCATGGAGGCTGAAGATGCTGCCACTTATTACTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCTCTTATTCTCTCACAATCAGCAGCATGGAGGCTGTAGATGCTGCCACTTATTACTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TATGACACATCCAAACTGGCTTCTGGAGTCCCTGCTCGCTTCAGTGGCAGTGGGTCTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TATGACACATCCAAACTGGCTTCTGGAGTCCCTGCTCGCTTCAGTGGCAGTGGGTCTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGTATAAGTTACATGCACTGGTATCAGCAGAAGCCAGGCACCTCCCCCAAAAGATGGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGTATAAGTTACATGCACTGGTACCAGCAGAAGCCTGTCACCTCCCCCAAAAGATGGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CCAGCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGCCAGCTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CCAGCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGGCAGCTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACTATGTCCTACTTTGACTACTGGGGCCAAGTGACCACGGTCACCGTCTCCTCAGGTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACTACGGTCCCGTTTGCTTACTGGGTCCAAGGGACCACGGTCACCGTCTCCTCAGGTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATGGAACTTGCCAGACTGACATCTGAGGATTCTGCCATCTATTACTGTGCAAGAGGGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATGGAGCTCCGCAGCCTGACATCTGAGGATTCTGCAGTCTATTACTGTGCAAGA---GAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AACCAGAAGTTCAAGGCCAAGGCCACAATGACTGTAGACAAATCCTCCAGCACAGCCTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAGCAGAAGTTCAAGGGCAAGGCCACATTGACTGTAGACAAGTCCTCCAGCACAGCCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TCCTGCAAGGGTTCTGGCTACACATTCACTGATTATGCTATGCACTGGGTGAAGCAGAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CAGGTCAAACTGCAGGAGTCAGGGGCTGAGCTGGTGAGGCCTGGGGGTCTCAGTGAAGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ΒP
                                                                                                                                                                                                                                                                                                                                                                                                                                                    gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              180
```

```
Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The invention comprises a method for treating a neurological disease or a central nervous system (CNS) disorder. The method involves displaying a therapeutic molecule capable of treating the neurological disease or CNS disorder on a viral display vehicle. The viral display vehicle is then introduced into the olfactory system of a subject to treat the disease or disorder. The method of the invention is useful for preventing, treating and diagnosing neurological diseases or CNS disorders, such as:
Alzheimer'd disease; Creutzfeld-Jakob disease; Huntington's chorea; viral infections of the brain; brain tumours; lysosomal storage diseases; Parkinson's disease; and multiple sclerosis. The present DNA sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Treating or diagnosing neurological diseases of the central nervous system, e.g. Alzheimer's disease, comprises displaying a polypeptide or diagnostic agent on viral display vehicle and introducing or detecting the display vehicle.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             represents a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Example
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               646;
541
                                                                        481
                                                                                                            478
                                                                                                                                                 421
                                                                                                                                                                                       418
                                                                                                                                                                                                                            361
                                                                                                                                                                                                                                                                358
                                                                                                                                                                                                                                                                                                     301
                                                                                                                                                                                                                                                                                                                                           298
                                                                                                                                                                                                                                                                                                                                                                              241
                                                                                                                                                                                                                                                                                                                                                                                                                    241
                                                                                                                                                                                                                                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2003-040542/03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2; Fig 11A; 214pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AA016066.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            UNIV RAMOT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          717
                                                                                                                                                                         CCAGCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGGCAGCTCA
                                                                                                                                                                                                                            ACTACGGTCCCGTTTGCTTACTGGGTCCAAGGGACCACGGTCACCGTCTCCTCAGGTGGA
                                                                                                                                                                                                                                                                                                                                                                                                        ATGGAGCTCCGCAGCCTGACATCTGAGGATTCTGCAGTCTATTACTGTGCAAGA---GAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAGCAGAAGTTCAAGGGCAAGGCCACATTGACTGTAGACAAGTCCTCCAGCACAGCCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCCTGCAAGACTTCTGGANACAAATTCACTGAATACACCATGCACTGGGTGAAGCAGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CAGGTGAAACTGCAGCAGTCAGGACCTGAACTGGTGNAGCCTGGGGGCTTCAGTGAAGATA
                     TATGACACATCCAAACTGGCTTCTGGAGTCCCTGCTCGGTTCAGTGGCAGTGGGTCTGGG
                                                                                                                                                 CCAGCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGCCAGCTCA
                                                                                                                                                                                                                                                                                                   ACTATGTCCTACTTTGACTACTGGGGCCAAGTGACCACGGTCACCGTCTCCTCAGGTGGA
                                                                                                                                                                                                                                                                                                                                                                                ATGGAACTTGCCAGACTGACATCTGAGGATTCTGCCATCTATTACTGTGCAAGAGGGGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BP; 178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             which
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLIED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 82.8%;
90.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; 174 C; 198 G; 167 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             was used in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 593.4; DB 10; Pred. No. 4e-158;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            & IND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DEV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 68;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ω
--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       õ
                                                                                                                                                 480
                                                                                                                                                                                                                                                                                                     360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             120
                                   597
                                                                                                            537
                                                                                                                                                                                       477
                                                                                                                                                                                                                                                                                                                                           357
                                                                        540
                                                                                                                                                                                                                            420
                                                                                                                                                                                                                                                                                                                                                                                300
                                                                                                                                                                                                                                                                                                                                                                                                                  297
                                                                                                                                                                                                                                                                                                                                                                                                                                                         240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60
```

멅 á 밁 ઈ В δ 밁 S 밁 S 밁 δ 밁 र् 밁 ঠ 밁 ş 밁 Ş

displaying display veh

ing therapeutic vehicle which i

disease CNS e.g., Alzheimer's disease, by c molecule capable of treating the disease on viral is then administered to subject through olfactory

Treating

neurological

2004-108188/11. )B; ADJ88113.

Example

SEQ

IJ

ĕ

<u>ა</u>

68pp;

English.

The invention relates to a method of treating a neurological disease of disorder of the central nervous system (CNS). The method involves displaying a therapeutic molecule capable of treating the neurological disease or disorder of the CNS on a viral display vehicle and introduciviral display vehicle into a subject by applying an effective amount of the viral display vehicle displaying the therapeutic molecule to an

introducing amount of

or

```
á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                     03-SEP-1999;
29-DEC-1999;
31-JUL-2000;
31-AUG-2000;
15-MAR-2001;
07-AUG-2001;
12-APR-2002;
06-JUN-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                              Neurological disease; central nervous system; CNS disorder; plaque-forming disease; AlAheimer's disease; SAA amyloidosis; hereditary Icelandic syndrome; senility; multiple myeloma; scrapie; bovine spongiform encephalopathy; BSE; kuru; Creutzfeldt-Jakob disease; CJD; Gerstmann-Streussler-Sheinker disease; GSS; fatal familial insommia; FFI; non-plaque-forming disease; Huntington's chorea; viral infection; brain tumour; lysosomal storage disease; neurodegeneration; multiple sclerosis; vaccine; beta amyloid peptide; beta AP; antibody;
                                                                                                                                                                                                                                                                                           11-MAR-2003;
                                                                                                                                                                                                                                                                                                                                 US2004013647-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADJ88112
                                                                                                                                                                                   (UYRA-)
                                                                                                                                                                                                                                                                                                                                                                                                                     sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  658
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        beta
                                                                                                                                                                                                                                                                                                                                                                                                                                       gene;
                                                                                                                                                                                   AIND
                                                                                                                                                                W
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CATCAGCGGAGTAGTTACCCCATTCACGTTCGGAGGGGGGCCCAAGCTGGAAATAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CATCAGCGGAGTAGTTACCCGCTCACGTTCGGTGCTGGGACACAGTTGGAAATAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCTCTTATTCTCTCACAATCAGCAGCATGGAGGCTGTAGATGCTGCCACTTATTACTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      amyloid peptide antibody (508)
                                                                                                                                                                                                     ; 2000US-00629971.
; 2000WO-IL000518.
; 2001US-00808037.
; 2001US-00830954.
; 2002US-0031735P.
; 2002US-00162889.
                                                                                                                                                                                    RAMOT
                                                                                                                                                                                                                                                                                            2003US-00384788
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (first
                                                                                                                                                                                                                                                              99US-0152417P.
99US-00473653.
                                                                                                                                                                                                                                                                                                                                           /*tag= a
/product= "508 antibody heavy chain
/partial
/note= "No start and stop codon"
                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
1. .717
                                                                                                                                                                                   Ą
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DNA;
                                                                                                                                                                 O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       heavy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       chain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        657
```

```
RESULT 7
ACC83315
ID ACC8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches 646;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              olfactory system of the subject. The method is useful for treating a neurological disease or disorder of CNS such as a plaque-forming disease such as Alzheimer's disease, late onset Alzheimer's disease, late onset Alzheimer's disease, presymptomatic Alzheimer's disease, SAA amyloidosis, hereditary Icelandic syndrome, senility, multiple myeloma, scrapie, bovine spongiform encephalopathy (BSE), kuru, Creutzfeldt-Jakob disease (CUD), Gerstmann-streussler-Sheinker disease (GSS) or fatal familial insomnia (FPI). The method is also useful for treating a non plaque forming disease or disorder e.g. Huntington's chorea, viral infections of the brain, brain tumours, lysosomal storage diseases which cause neurodegeneration and are manifested by enzyme deficiencies and multiple sclerosis. The invention is also used in the preparation of vaccines. The present sequence is human beta amyloid peptide (beta AP) antibody heavy chain DNA. This sequence is used to illustrate the method of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local Similarity
                                                                                                                                                            859
                                                                                                                                                                                                         601
                                                                                                                                                                                                                                                    598
                                                                                                                                                                                                                                                                                                 541
                                                                                                                                                                                                                                                                                                                                              538
                                                                                                                  661
                                                                                                                                                                                                                                                                                                                                                                                            481
                                                                                                                                                                                                                                                                                                                                                                                                                                    478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ب
                                                                                                                                              CATCAGCGGAGTAGTTACCCGCTCACGTTCGGTGCTGGGACACAGTTGGAAATAAAA 714
                                                                                                                                                                                                     ACCICTTATICICTCACAATCAGCAGCATGGAGGCTGAAGATGCTGCCACITATIACTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCAGCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGGCAGCTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGCGGTTCAGGCGAGGTGGCTCTGGCGGTGGCGATCGGACATCGAGCTCACTCTCAGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACTACGGTCCCGTTTGCTTACTGGGTCCAAGGGACCACGGTCACCGTCTCCTCAGGTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATGGAGCTCCGCAGCCTGACATCTGAGGATTCTGCAGTCTATTACTGTGCAAGA---GAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCCTGCAAGACTTCTGGANACAAATTCACTGAATACACCATGCACTGGGTGAAGCAGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CAGGTGAAACTGCAGCAGTCAGGACCTGAACTGGTGNAGCCTGGGGCCTTCAGTGAAGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             717 BP; 178
                                                                                                                                                                                                                                                  ACCTCTTATTCTCTCACAATCAGCAGCATGGAGGCTGTAGATGCTGCCACTTATTACTGC
                                                                                                                                                                                                                                                                                                                                            TATGACACATCCAAACTGGCTTCTGGAGTCCCTGCTCGCTTCAGTGGCAGTGGGTCTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                  AGTATAAGTTACATGCACTGGTACCAGCAGAAGCCTGTCACCTCCCCCAAAAAGATGGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACTATGTCCTACTTGACTACTGGGGCCAAGTGACCACGGTCACCGTCTCCTCAGGTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATGGAACTTGCCAGACTGACATCTGAGGATTCTGCCATCTATTACTGTGCAAGAGGGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AACCAGAAGTTCAAGGGCAAGGCCACAATGACTGTAGACAATCCTCCAGCACAGCCTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCCTGCAAGGGTTCTGGCTACACATTCACTGATTATGCTATGCACTGGGTGAAGCAGAGT 120
                                                                                                                                                                                                                                                                                                                                                                                       AGTATAAGTTACATGCACTGGTATCAGCAGAAGCCAGGCACCTCCCCCAAAAGATGGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CCAGCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGCCAGCTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAGCAGAAGTTCAAGGGCCAAGGCCACATTGACTGTAGACAAGTCCTCCAGCACAGCCTAC 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CAGGTCAAACTGCAGGAGTCAGGGGCTGAGCTGAGGCCTGGGGGTCTCAGTGAAGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   82.8%;
90.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; 174 C; 198 G; 167 T; 0 U;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 593.4; DB
Pred. No. 4e-158;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   68;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ω
••
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                               717
                                                                                                                                                                                                                                                  657
                                                                                                                                                                                                                                                                                               600
                                                                                                                                                                                                                                                                                                                                            597
                                                                                                                                                                                                                                                                                                                                                                                       540
                                                                                                                                                                                                                                                                                                                                                                                                                                  537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           180
```

밁

S

밁 5

1

ACC83315

standard;

DNA;

ВP

Ś

TCCTGCAAGACTTCTGGANACAAATTCACTGAATACACCATGCACTGGGTGAAGCAGAGC

TCCTGCAAGGCTTCTGGATACACATTCACTAGCTATGTTATGCACTGGGTGAAGCAGAAG

126

120

66 60

밁

67 61 밁

Ś 밁 Ş 밁 Ś 밁 á 밁 Ś 밁 Ś 밁 S 밁 Ś 밁 δ 片 S

```
밁
                             ঠ
                                                                                                                            Query Match
Best Local S
Matches 635
                                                                                                                                                                    tumour is a primary or a metastasized tumour such as carcinoma of the bladder, breast, cervix, colorectum, lung, ovary, pancreas, prostate, stomach, cholangiocarcinoma, gastric sarcoma, glioma, lymphoma, melanoma, multiple myeloma, osteosarcoma, head and neck tumor and solid tumor. The method of the invention is useful for X-ray-guided delivery of a therapeutic composition, a diagnostic composition or their combinations to a tumour in a subject. The current sequence represents a single chain antibody encoding sequence that was identified following in vivo panning to irradiated tumours. This antibody binds platelet membrane glycoproteir
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Tumour;
cervix;
                                                                                                                                                                                                                                                                                                              The invention relates to a method for identifying a molecule that binds an irradiated tumour in a subject. The method of the invention involves exposing a tumour to ionizing radiation, administering a library of diverse molecules to a subject, and isolating one or more molecules of the library from the tumour. The method of the invention is useful for identifying a molecule that binds an irradiated tumour in a subject e.g. warm-blooded vertebrate and human, and also for tumour detection. The
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Identifying molecule that binds to irradiated tumor in a subject, exposing tumor to ionizing radiation, administering library of dimolecules and isolating library molecules from tumor to identify
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               cervix; colorectum; lung; ovary; pancreas; prostate; stomach; cholangiocarcinoma; gastric sarcoma; glioma; lymphoma; melanoma; multiple myeloma; osteosarcoma; head; neck; radiation; x-ray; gene;
                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  antibody;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 2003-421186/39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 03-OCT-2001; 2001US-0328123P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              27-SEP-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             10-APR-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACC83315;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (UYVA-) UNIV VANDERBILT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO2003028640-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              29-AUG-2003
   7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              chain
                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              drug delives colorectum;
                                                                                                                            726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DE,
CAGGTCAAGCTGCAGCAGCCTGAGCTGAGCTGGTAAAGCCTGGGGCTTCAGTGAAGATG
                      CAGGTGAAACTGCAGCAGTCAGGACCTGAACTGGTGNAGCCTGGGGGCTTCAGTGAAGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                          Page 106-107; 108pp; English.
                                                              Conservative
                                                                                                                          BP; 177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2002WO-US030917
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               delivery; ligand; cancer; carcinoma;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               antibody encoding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first entry
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Qus;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /*tag= ;
/partial
/note= "r
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                            80.1%;
                                                                                                                          A; 183 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      по
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       þ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          stop codon"
                                                              ٥,
                                                                            Score 574; DB 8;
Pred. No. 1.3e-152
                                                                                                                            201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DNA #SEQ ID
                                                              Mismatches
                                                                                                                            G.
                                                                                                                            165 T; 0 U; 0
                                                                              .3e-152;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               19
                                                                                        Length 726;
                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             bladder; breast;
                                                                                                                          Other;
                                                              ω
••
                                                                                                                                                                      vivo panning
glycoprotein
                                                              Gaps
```

밁

121

CCTGGGCAGGGCCTTGAGTGGATTGGATATATTAATCCTTACAATGATGGTACTAAGTAC

186 180

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                   ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                     angioma; macular degeneration; melanoma; adenocarcinoma; malignant glioma; prostatic carcinoma; kidney carcinoma; bladder carcinoma, pancreatic carcinoma; thyroid carcinoma; blung carcinoma; colon carcinoma; rectal carcinoma; brain carcinoma; liver carcinoma; breast carcinoma; ovary carcinoma; angiofibroma; retrolental fibroglasia; haemangioma; Kaposi's sarcoma; single chain variable fragment; scFv; gene; ds.
                                                                                                                                                                                                                                       Tumour; benign intracranial meningioma; arteriovenous
                                                                                                                                                                                                                                                              Single chain variable fragment
                                                                                                                               Unidentified
                                                                                                                                                                                                                                                                                      16-DEC-2004
                                                                                                                                                                                                                                                                                                                                     ADT91208
                                                                                                                                                                                                                                                                                                                                                                                                                                             607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     865
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                            CATCAGCGGAGTAGTTACCCGCTCACGTTCGGTGCTGGGACACAGTTGGAAATAAAACGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCTCTTATTCTCTCACAATCAGCAGCATGGAGGCTGTAGATGCTGCCACTTATTACTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TATGACACATCCAAACTGGCTTCTGGAGTCCCCTGCTTCAGTGGCAGTGGGTCTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGTATAAGTTACATGCACTGGTACCAGCAGAAGCCTGTCACCTCCCCCCAAAAGATGGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCAGCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGGCAGCTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATGGAGCTCCGCAGCCTGACATCTGAGGATTCTGCAGTCTATTACTGTGCAAGA---GAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGTGTAAGTTACATGCACTGGTTCCAGCAGAAGCCAGGCACTTCTCCCAAACCCTGGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCAACAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATAACCTGCAGTGCCAGCTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCGGATCGGACATTGAGCTCACCCAGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACTACGGTGCTTTGGACTACTGGGGCCAAGGGACCACGGTCACCGTCTCCTCAGGTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAGCAGAAGTTCAAGGGCAAGGCCACATTGACTGTAGACAAGTCCTCCAGCACAGCCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCTCTTATTCTCTCACAATCAGCAGCATGGAGGCTGAAGATGCTGCCACTTATTACTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TATGGCACATCCAACCTGGCTTCTGGAGTCCCTGTTCGCTTCAGTGGCAGTGGATCTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACTACGGTCCCGTTTGCTTACTGGGTCCAAGGGACCACGGTCACCGTCTCCTCAGGTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AATGAGAAGTTCAAAGGCCAAGGCCGCACTGACTTCAGACAAATCCTCCAGCACAGCCTAC
                                                                                                                                                                                                                                                                                     (first entry)
                                                  /product= "Single cantibody"
                                                                                             Location/Qualifiers
1. .726
                                                                                                                                                                                                                                                                                                                                    DNA;
                                    "No
                                                                                                                                                                                                                                                                                                                                     726
                                    doag
                                                                                                                                                                                                                                                                                                                                     BP
                                                                                                                                                                                                                                                             (scFv) antibody encoding
                                                                      chain
                                                                      variable
                                                                      fragment
                                                                                                                                                                                                                                        malformation;
                                                                                                                                                                                                                                                              DNA
                                                                      (scFv)
                                                                                                                                                                                                                                                               #2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        240
                                                                                                                                                                                                                                                                                                                                                                                                                      717
                                                                                                                                                                                                                                                                                                                                                                                                                                             999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  246
```

```
The invention relates to a method for screening phage-displayed CC antibodies binding to radiation-inducible neoantigen on cell. The method ci involves contacting cell with antibodies, treating cell with radiation, CC contacting cell with antibodies not binding to cell and detecting the count antibody. The method is useful for screening several phage-cc displayed antibody. The method is useful for screening several phage-cc displayed antibody. The method is useful for screening several phage-cc meantigen present on a cell, where the cell is tumour cell chosen from CC benign intracranial meningiomas, arteriovenous malformation, angioma, CC macular degeneration, melanoma, andenocarcinoma, malignant glioma, CC prostatic carcinoma, kidney carcinoma, bladder carcinoma, plioma, cc arcinoma, thyroid carcinoma, lung carcinoma, colon carcinoma, rectal CC carcinoma, brain carcinoma, liver carcinoma, breast carcinoma, ovary CC carcinoma, solid tumours, solid tumour metastases, angiofibromas, creatinoma carcinoma, solid tumours, solid tumour metastases, angiofibromas, thyroplasias, haemangiomas, Kaposi's sarcoma, head and neck CC arcinomas and their combinations or vascular endothelial cell. The CC carcinomas and their combinations or vascular endothelial cell. The CC antibody that binds to radiation-inducible neoantigens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             28-APR-2000;
09-NOV-2001;
27-SEP-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Screening phage-displayed antibodies binding to radiation-inducible neoantigen on cell, comprises contacting cell with antibodies, treat cell with radiation, contacting cell with antibodies not binding to detecting bound antibody.
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 4; SEQ ID NO 19; 64pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           P-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    30-SEP-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (UYVA-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2004-698661/68
)B; ADT91209.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VIND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; 2000WO-US011485.
; 2001US-00914605.
; 2002US-00259087.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VANDERBILT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2003US-00689006.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          æ
                                                                                                                                                                                                                                                                                                                                                                                                                                                  English.
```

```
Sequence
726
B₽;
177
A; 183
C; 201
Ģ
 165
T; 0 U;
 0
```

Query Match Best Local S Matches 635

al Similarity 635; Conserv

Conservative

<u>.</u>.

Score 574; DB Pred. No. 1.3e 0; Mismatches

No. 1.

Length

Indels

ω •

Gaps

80.1%;

```
367
                          358
                                                        307
                                                                                     298
                                                                                                                 247
                                                                                                                                             241
                                                                                                                                                                           187
                                                                                                                                                                                                        181
                                                                                                                                                                                                                                      127
                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                               67
                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                                         7
                                                                                                                                                                                                                                                                                                                                                                                   r
                                                                                                                                                                                                                                                       CATGGAAAGAGCCTTGAGTGGATTGGAGGTATTAATCCTAACAATGGTGGTACTACTAC
                                                                                                                                                                                                                                                                                                               TCCTGCAAGACTTCTGGANACAAATTCACTGAATACACCATGCACTGGGTGAAGCAGAGC
                                                                                                                                                                                                                                                                                                                                                                            CAGGTGAAACTGCAGCAGTCAGGACCTGAACTGGTGNAGCCCTGGGGGCTTCAGTGAAGATA
                 ATGGAGCTCCGCAGCCTGACATCTGAGGATTCTGCAGTCTATTACTGTGCAAGA---
                                                                                                                                                                                               AAGCAGAAGTTCAAGGGCAAGGCCACATTGACTGTAGACAAGTCCTCCAGCACAGCCTAC
                                                                                                                                                                                                                                      CCTGGGCAGGGCCTTGAGTGGATTGGATATATTAATCCTTACAATGATGGTACTAAGTAC
                                                                                                                                                                                                                                                                                                 TCCTGCAAGGCTTCTGGATACACATTCACTAGCTATGTTATGCACTGGGTGAAGCAGAAG
                                                                                                                                                                                                                                                                                                                                                         CAGGTCAAGCTGCAGCAGTCAGGACCTGAGCTGGGTAAAGCCTGGGGCTTCAGTGAAGATG
                                                         AACTACGGTGCTTTGGACTACTGGGGCCAAGGGACCACGGTCACCGTCTCCTCAGGTGGA
                                                                         ACTACGGTCCCGTTTGCTTACTGGGTCCAAGGGACCACGGTCACCGTCTCCCTCAGGTGGA
                                                                                                                                                                              <u>AATGAGAAGTTCAAAGGCAAGGCCGCACTGACTTCAGACAAATCCTCCAGCACAGCCTAC</u>
                                                                                                                   DB 13;
L.3e-152;
hes 82;
                                                                                                                                               -GAT
                          417
                                                        366
                                                                                                                                                                                                                                                                                                                             120
 426
                                                                                     357
                                                                                                                                                                                                                                                                   180
                                                                                                                                                                                                                                                                                                                                                         66
                                                                                                                   306
                                                                                                                                               297
                                                                                                                                                                                                        240
                                                                                                                                                                                                                                                                                                 126
                                                                                                                                                                           246
                                                                                                                                                                                                                                      186
```

S 밁 Ś S 片 á 멼 S 밁 Ş 밁

片

```
RESULT 9
AAF61510
ID AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX AAF6
XX T1-S
DT 11-S
DT 11-S
DT 12-S
DT 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                Cell-targeting vector selective for T lymphocytes, useful in gene therapy of e.g. acquired immune deficiency syndrome, encodes a single-chain variable antibody fragment.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Tlymphocyte; antibody; single chain variable antibody; scFv; human; cell-targeting vector; antiviral; cytostatic; immunostimulant; AIDS; gene therapy; immunization; diagnosis; T cell-associated disease; SCID; acquired immune deficiency syndrome; severe combined immune deficiency;
                                                                                                                                                                                                                                      27-SEP-1999;
                                                                                                                                                                                                                                                                             27-SEP-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Spleen necrosis Chimeric.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DNA encodinģ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        11-SEP-2003
25-JUN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAF61510
                                                                                                                                                                                               (BUND )
                                                                                                                 2001-246140/26.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            658
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  478
                                                                                                                                                                                               BUNDESREPUBLIK DEUT PAUL-EHRLICH-INST
                                                                                                AAB70841.
                                                                                                                                                        ζ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CATCAGCGGAGTAGTTACCCGCTCACGTTCGGTGCTGGGACACAGTTGGAAATAAAACGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCAACAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATAACCTGCAGTGCCAGCTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CAACAGTGGAGTAGTTACCCACTCACGTTCGGAGGGGGGGACCAAGCTGGAAATAAAACGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCTCTTATTCTCTCACAATCAGCAGCATGGAGGCTGAAGATGCTGCCACTTATTACTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCTCTTATTCTCTCACAATCAGCAGCATGGAGGCTGTAGATGCTGCCACTTATTACTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TATGGCACATCCAACCTGGCTTCTGGAGTCCCTGTTCGCTTCAGTGGCAGTGGATCTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TATGACACATCCAAACTGGCTTCTGGAGTCCCTGCTTCAGTGGCAGTGGGGTCTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGTGTAAGTTACATGCACTGGTTCCAGCAGAAGCCAGGCACTTCTCCCCAAACCCTGGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGTATAAGTTACATGCACTGGTACCAGCAGAAGCCTGTCACCTCCCCCAAAAGATGGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CCAGCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGGCAGCTCA
                                                                                                                                                        Engelstaedter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SNV-env leader/human K6-scFv fusion
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (revised)
(first entry)
                                                                                                                                                                                                                                      99DE-01046142
                                                                                                                                                                                                                                                                             99DE-01046142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /product= "SNV-env leader peptide"
/note= "No stop codon given"
136. .927
                                                                                                                                                                                                                                                                                                                                                                                                            /product= "K6-scFv"
/note= "no stop codon given"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /*tag=
                                                                                                                                                                                                                                                                                                                                                                                              partial/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               fusion
                                                                                                                                                                                                                                                                                                                                                                                                                                                           *tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        927
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             construct; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ₽₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         486
                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                          망
                                                                                                                             Ś
                                                                                                                                                                        맑
                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local
```

Claim 1; Fig 2; 18pp; German.

This invention describes a novel cell-targeting vector (A) containing a CDNA sequence (I) encoding a single-chain variable antibody fragment (ScFv). The products of the invention have antivital, cytostatic and cimmunostimulant activity and can be used in gene therapy, immunization conditional activity and can be used in gene therapy. Immunization conditional diagnosis particularly of T cell-associated diseases, specifically cacquired immune deficiency syndrome (ANDS), severe combined immune conditional cells susceptible to spleen necrosis virus carcinomal cells. After 48 hours, the cells were stained with X-gal to carcinoma cells. After 48 hours, the cells were stained with X-gal to carcinoma cells. After 48 hours, the cells were stained with X-gal to condition for D17, 1 million for CB166 but less than 100 for HeLa, convert cell targeting vectors described in the invention. (Updated on 11-covel cell targeting vectors described in the invention. (Updated on 11-cycl)

Sequence 927 BP; 205 A; 238 C; 277 ç, 207 T; 0 U; 0 Other;

Length 927;

```
620
                                                                                                                                                482
                                                                                                                                                                               560
                                                                                                                                                                                                          422
                                                                                                                                                                                                                                                                       362
                                                                                                                                                                                                                                                                                                     443
                                                                                                                                                                                                                                                                                                                                   302
                                                                                                                                                                                                                                                                                                                                                                 383
                                                                                                                                                                                                                                                                                                                                                                                            242
                                                                                                                                                                                                                                                                                                                                                                                                                            323
                                                                                                                                                                                                                                                                                                                                                                                                                                                          182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 203
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      630;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2 AGGTGAAACTGCAGCAGTCAGGACCTGAACTGGTGNAGCCTTGGGGGCTTCAGTGAAGATAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
               CTTATTCTCTCACAATCAGCAGCATGGAGGCTGTAGATGCTGCCACTTATTACTGCCATC
                                                                          ACACATCCAAACTGGCTTCTGGAGTCCCTGCTCCAGTGGCAGTGGGTCTGGGACCT
                                                                                                                  TAAGTTACATGCACTGGTACCAGCAGAAAGCCAGGCACCTCCCCCAAAAGATGGATTTATG
                                                                                                                                             TAAGTTACATGCACTGGTACCAGCAGAAGCCTGTCACCTCCCCCAAAAGATGGATTTATG
                                                                                                                                                                              CAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGCCAGCTCAAGTA
                                                                                                                                                                                                              CAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGGCAGCTCAAGTA
                                                                                                                                                                                                                                                                       CGGTCCCGTTTGCTTACTGGGTCCAAGGGACCACCGGTCACCGTCTCCCTCAGGTGGAGGCG
                                                                                                                                                                                                                                                                                                                                                                 TGCACCTCAGCAGCCTGACATCTGAGGACTCTGCGGTCTATTACTGTGCAAGAAAGGGCT
                                                                                                                                                                                                                                                                                                                                                                                 TGGAGCTCCGCAGCCTGACATCTGAGGATTCTGCAGTCTATTACTGTGCAAGAGATACTA
                                                                                                                                                                                                                                                                                                                                                                                                                            ATCAAAACTTCAAGGGCAAGGCCACACTGACTGTAGACAAGTCCTCCACCACAGTCTACA
                                                                                                                                                                                                                                                                                                                                                                                                                                             AGCAGAAGTTCAAGGGCAAGGCCACATTGACTGTAGACAAGTCCTCCAGCCACAGCCTACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTTGCAAGGCTTCTGGCTACACCTTCACCAGCTACTGGATGCACTGGTTGAAGCAGAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCTGCAAGACTTCTGGANACAAATTCACTGAATACACCATGCACTGGGTGAAGCAGAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGGTCAAGCTGCAGGAGTCAGGGACTGAACTTGTGAAGCCTGGGGGCTTCAGTGAATCTGT
                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     79.3%;
88.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 568.4;
Pred. No. 5.6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; DB 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        83;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ω
••
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                541
                                                                                                                                                                               619
                                                                                                                                                                                                              481
                                                                                                                                                                                                                                                                       421
                                                                                                                                                                                                                                                                                                                                                                                               301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61
799
                          661
                                                                                     601
                                                                                                                     679
                                                                                                                                                                                                                                            559
                                                                                                                                                                                                                                                                                                      499
                                                                                                                                                                                                                                                                                                                                   361
                                                                                                                                                                                                                                                                                                                                                                 442
                                                                                                                                                                                                                                                                                                                                                                                                                             382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             202
                                                       739
```

J

```
RESULT 10
ADT91212
 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ş
                          The invention relates to a method for screening phage-displayed cantibodies binding to radiation-inducible neoantigen on cell. The method cinvolves contacting cell with antibodies, treating cell with radiation, contacting cell with antibodies, treating cell with radiation, contacting cell with antibodies not binding to cell and detecting the bound antibody. The method is useful for screening several phage-contacting antibodies for an ability to bind to a radiation-inducible neoantigen present on a cell, where the cell is tumour cell chosen from the contact generation, meningiomas, arteriovenous malformation, angioma, comecular degeneration, melanoma, adenocarcinoma, malignant glioma, comecular degeneration, melanoma, adenocarcinoma, malignant glioma, concentratic carcinoma, kidney carcinoma, bladder carcinoma, panoreatic carcinoma, thyroid carcinoma, lung carcinoma, rectal carcinoma, brain carcinoma, liver carcinoma, breast carcinoma, ovary carcinoma, brain carcinoma, liver carcinoma, breast carcinoma, ovary carcinoma, brain carcinoma, haemangiomas, Kaposi's sarcoma, head and neck carcinoma and their combinations or vascular endothelial cell. The
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           28-APR-2000;
09-NOV-2001;
27-SEP-2002;
                                                                                                                                                                                                                                                                                                                                     Screening phage-displayed antibodies binding to radiation-inducible neoantigen on cell, comprises contacting cell with antibodies, treating cell with radiation, contacting cell with antibodies not binding to cell, detecting bound antibody.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    angioma; macular degeneration; melanoma; adenocarcinoma; malignant glioma; prostatic carcinoma; kidney carcinoma; bladder carcinoma; pancreatic carcinoma; thyroid carcinoma; lung carcinoma; colon carcinoma; rectal carcinoma; brain carcinoma;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   liver carcinoma; breast carcinoma; ovary carcinoma; angiofibroma; retrolental fibroplasia; haemangioma; Kaposi's sarcoma; single chain variable fragment; scFv; gene; ds.
                                                                                                                                                                                                                                                                                                         Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Hallahan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20-OCT-2003;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Unidentified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Tumour;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADT91212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US2004191249-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (UYVA-) UNIV
                                                                                                                                                                                                                                                                                                                                                                                                                                         2004-698661/68.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           chain
equence bin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          benign
                                                                                                                                                                                                                                                                                                       SEQ ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            standard; DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGCGGAGTAGTTACCCATGGACGTTCGGTGGAGGGACCAAGCTGGAAATAAAACGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AGCGGAGTAGTTACCCGCTCACGTTCGGTGCTGGGACACAGTTTGGAAATAAAACGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          variable fragment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VANDERBILT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2000WO-US011485.
2001US-00914605.
2002US-00259087.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2003US-00689006
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mernaugh
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       intracranial meningioma; arteriovenous
                                                                                                                                                                                                                                                                                                       ĕ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /*tag= a
/product=
antibody"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1. .786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
is a DNA encoding single chain variable ids to radiation-inducible neoantigens.
                                                                                                                                                                                                                                                                                                     23; 64pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            786
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "Single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ₽₽
                                                                                                                                                                                                                                                                                                     English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (scFv) antibody encoding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    chain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    variable
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                fragment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          malformation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DNA
               iragment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           #4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 855
               (scFv)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              717
```

```
RESULT 11
ADC79233
ID ADC79
XX ADC79
AC ADC79
XX O1-JA
DT O1-JA
XX VK-8-
XX CA 12
KW CA 12
KW GB.
                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                  ş
                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                      δ
                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SS XX
                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                 01-JAN-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                                            VK-8-1.9
                                                                                        ADC79233;
                                                                                                             ADC79233
           125 tumour
125 tumour
                                                                                                                                                                                                                                                                                                       547
                                                                                                                                                                                                                                                                                 595
                                                                                                                                                                                                                                                                                                                                                                                                                                              367
                                                                                                                                                                                         715
                                                                                                                                                                                                                 667
                                                                                                                                                                                                                                       655
                                                                                                                                                                                                                                                            607
                                                                                                                                                                                                                                                                                                                              535
                                                                                                                                                                                                                                                                                                                                                      487
                                                                                                                                                                                                                                                                                                                                                                           475
                                                                                                                                                                                                                                                                                                                                                                                                 427
                                                                                                                                                                                                                                                                                                                                                                                                                      415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  629;
                                                                                                                                                                    727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          _
                                            BCFV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATGGAGCTCCGCAGCCTGACATCTGAGGATTCTGCAGTCTATTACTGTGCAAGA-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAGCAGAAGTTCAAGGGCAAGGCCACATTGACTGTAGACAAGTCCTCCAGCACAGCCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CAGGTGAAACTGCAGCAGTCAGGACCTGAACTGGTGNAGCCTGGGGCTTCAGTGAAGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             786
                                                                                                              standard;
                                                                                                                                                                    ရှိ
                                                                                                                                                                                            ရှိ
                                                                                                                                                                                                                               TGCCATCAGCGGAGTAGTTACCCGCTCACGTTCGGTGCTGGGACACAGTTGGAAATAAAA
                                                                                                                                                                                                                                                            GGGACCTCTTATTCTCTCACAATCAGCAGCGTGGAGGCTGAAGATGCTGCCACTTATTAC
                                                                                                                                                                                                                                                                         GGGACCTCTTATTCTCTCACAATCAGCAGCATGGAGGCTGTAGATGCTGCCACTTATTAC
                                                                                                                                                                                                                                                                                                         ATTTATTACACATCCAACCTGGCTTCTGGAGTCCCAGCTCGCTTCAGTGGCAGTGGGTCT
                                                                                                                                                                                                                                                                                                                      ATTTATGACACATCCAAACTGGCTTCTGGAGTCCCTGCTCGCTTCAGTGGCAGTGGGTCT
                                                                                                                                                                                                                                                                                                                                                      TCAAATGTAAAGTACATGTACTGGTACCAGCAGAAGTCAGGTGCCTCCCCAAACTATGG
                                                                                                                                                                                                                                                                                                                                                                    TCAAGTATAAGTTACATGCACTGGTACCAGCAGAAGCCTGTCACCTCCCCCCAAAAGATGG
                                                                                                                                                                                                                                                                                                                                                                                                  TCTCCAGCAATCATGTCTGCAACTCTAGGGGAGAAGGTCACCATGAGCTGCAGGGCCAGC
                                                                                                                                                                                                                                                                                                                                                                                                               TCTCCAGCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGGCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                              GGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCGGATCGGACATTGAGCTCACCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGTTACTACGGAGGGTTTTCTTACTGGGGCCAAGGGACCATGGTCACCGTCTCCTCAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GATACTACGGTCCCGTTTGCTTACTGGGTCCAAGGGACCACGGTCACCGTCTCCTCAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AACCAGAAGTTCAAGGGCAAAGGCCACATTGACTGTAGACAAATCCTCCACCACGGCCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AATGGAAAGAGCCTTGAGTGGATTGGAACTATTGATCCTTACTATGGTGGTACTAGCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TCCTGCAAGGCTTCTGGATACACATTCACTAGCTATGTTATGCACTGGGTGAAGCAGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCCTGCAAGACTTCTGGANACAAATTCACTGAATACACCATGCACTGGGTGAAGCAGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CAGGTGAAGCTGCAGCAGTCTGGACCTGAGCTGGTAAAAGCCCTGGGGCTTCAGTGAAGATG
                                                                                                                                                                                                                TGCCAGCAGTTTACTAGTTCCCCGTATACGTTCGGATCGGGCACCAÁGCTGGAAATCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATACAGCTCAAGAGCCTGACATCTGAGGACTCTGCAGTCTATTACTGTGCAAGATGGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                          717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BP;
                                                                 (first
           antigen-associated
                     antigen; CA 125 tumour antigen modulator;
                                            nucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             185
                                                                                                              DNA;
                                                                 entry
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          78.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             200
                                                                                                              716
                                           sequence SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ,
,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 561.4;
Pred. No. 5.1e
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ü
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             224
           disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           561.4;
No. 5.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ģ
                                            IJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             177
                                            NO:1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1e-149;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1
           cytostatic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  88;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ç;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0 Other
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length
          gene
          therapy;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
          gene;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          126
                                                                                                                                                                                                                                                                                                                                                                                                 486
                                                                                                                                                                                                                                                                                                                                                                                                                                              426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      99
                                                                                                                                                                                                                                                                                                          606
                                                                                                                                                                                                                                                                                                                               594
                                                                                                                                                                                                                                                                                                                                                     546
                                                                                                                                                                                                                                                                                                                                                                           534
                                                                                                                                                                                                                                                                                                                                                                                                                        474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   414
                                                                                                                                                                                                                                      714
                                                                                                                                                                                                                                                            999
                                                                                                                                                                                                                                                                                   654
```

```
Ś
                                                                                     밁
                                                                                                              Ś
                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              á
                            맑
                                                                                                                                            맑
                                                                                                                                                                                                     В
                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local S
Matches 629
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 modulating & CA 125 tumour antigen in a mammalian cell. Also described:
(1) a recombinant nucleic acid comprising at least one sequence selected from the group consisting of ADC79233, ADC79235, ADC79235, ADC79236, ADC79238; (2) a vector comprising the recombinant nucleic acid; (3) a host cell; (4) a pharmaceutical composition; (5) preventing or treating CA 125 tumour antigen-associated disease in a mammal; and (6) negatively modulating a CA 125 tumour antigen in a mammalian cell. A modulator capable of negatively modulating a CA 125 tumour antigen in a mammalian cell. A cytostatic activity, and can be used in gene therapy. The modulator, recombinant nucleic acid, vector or host cell can be used for preparing a composition for preventing or treating CA 125 tumour antigen-associated disease in a mammal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    11-MAR-2002;
28-FEB-2003;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               11-MAR-2003;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          18-SEP-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO2003076465-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (UYSH ) UNIV SHERBROOKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       modulator capable of negatively modulating a CA 125 tumor antigen ammalian cell, useful for preparing a composition for preventing or ating CA 125 tumor antigen-associated disease in a mammal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2003-722323/68
                             360
                                                       358
                                                                                     300
                                                                                                                301
                                                                                                                                            240
                                                                                                                                                                         241
                                                                                                                                                                                                     180
 418
                                                                                                                                                                                                                                  181
                                                                                                                                                                                                                                                              120
                                                                                                                                                                                                                                                                                         121
                                                                                                                                                                                                                                                                                                                                                                                                                                     629;
                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                                 19
                                                                                                                                                                                                                                                                                                                                                                             μ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ç
                                                                                                                                                              ATGGAGCTCCGCAGCCTGACATCTGAGGATTCTGCAGTCTATTACTGTGCAAGAGATACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQ ID NO 1;
                                                                                                           ACGGTCCCG---TTTGCTTACTGGGTCCAAGGGACCACGGTCACCGTCTCCTCAGGTGGA
                                                                                                                                                                                                                                                                                CAGGTGAAACTGCAGCAGTCAGGACCTGAACTGGTGNAGCCTGGGGCTTCAGTGAAGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              716
CCAGCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGGCAGCTCA
                                                       GGGTTTTGGTACTTCGATGTCTGGGGCCAAGGGACCACGGTCACCGTCTCCTCAGGTGGA
                                                                                                                                            ATGGAGCTCCGCAGCCTGACATCTGAGGACTCTGCAGTCTATTACTGTGCAAGATCTGGG
                                                                                                                                                                                                     AACCAGAAATTCAGGAACAAGGCCTCCTTGACTGTAGACACTTCCTCCAGCACAGCCTAC
                                                                                                                                                                                                                      AAGCAGAAGTTCAAGGGCAAGGCCACATTGACTGTAGACAAGTCCTCCAGCACAGCCTAC
                                                                                                                                                                                                                                                             CATGGAAAGAGCCTTGAGTGGATTGGATATTTATCCTTACAATGGTGATACTGGCTAC
                                                                                                                                                                                                                                                                                                                       TCCTGCAAG-
                                                                                                                                                                                                                                                                                                                                              TCCTGCAAGACTTCTGGANACAAATTCACTGAATACACCATGCACTGGGTGAAGCAGAGC
                                                                                                                                                                                                                                                                                                                                                                            CAGGTCCAGCTGCAGGAGTCAGGACCTGAACTGGTGAAACCTGGGGGCCTCAGTGAAGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2002US-0363306P.
2003CA-02420494.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2003WO-CA000341.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BP; 170 A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Piche
                            TCAGGCGGAGGTGGCTCTGGCGGTGGCGGATCGGACATCCAGATGACCCAGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            P
                                                                                                                                                                                                                                                                                                                   - CTTCTGGATACACATTCACTGACTACAACATGCACTGGGTGAAGCAGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                               77.5%;
87.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          90pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Beaudin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           191 C; 196 G; 159
                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 555.8;
Pred. No. 1.9e
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                 8; DB 10;
1.9e-147;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           T; 0 U;
                                                                                                                                                                                                                                                                                                                                                                                                                                     84;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                              716;
                                                                                                                                                                                                                                                                                                                                                                                                                                   4.
                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ç
                                                                                                                                                                         300
                                                                                                                                                                                                                                                             179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ä
                            419
                                                       417
                                                                                   359
                                                                                                                357
                                                                                                                                            299
                                                                                                                                                                                                     239
                                                                                                                                                                                                                                                                                        180
                                                                                                                                                                                                                                                                                                                    119
                                                                                                                                                                                                                                                                                                                                                 120
                                                                                                                                                                                                                                                                                                                                                                            60
                                                                                                                                                                                                                                                                                                                                                                                                                                   2
```

The invention relates to a method for identifying a molecule that binds an irradiated tumour in a subject. The method of the invention involves exposing a tumour to ionizing radiation, administering a library of diverse molecules to a subject, and isolating one or more molecules of the library from the tumour. The method of the invention is useful for identifying a molecule that binds an irradiated tumour in a subject e.g. warm-blooded vertebrate and human, and also for tumour detection. The

```
ACC83314
ID ACC83
XX ACC83
AC ACC83
AC ACC83
AC ACC83
AC Tumou
XX Tumou
XX Cervi
KW Cervi
KW Chola
XX Synth
XX Synth
XX Synth
XX ACC8
FT CDS
F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           닭
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                   Identifying molecule that binds to irradiated tumor in a subject, by exposing tumor to ionizing radiation, administering library of diverse molecules and isolating library molecules from tumor to identify the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cervix; colorectum; lung; ovary; pancreas; prostate; stomach;
cholangiocarcinoma; gastric sarcoma; glioma; lymphoma; melanoma;
multiple myeloma; osteosarcoma; head; neck; radiation; x-ray; gene;
                                                                                                                                                                                                  Claim
                                                                                                                                                                                                                                                                                                                                                                            P-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  03-OCT-2001; 2001US-0328123P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 antibody;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Tumour; drug
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Single chain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    29-AUG-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACC83314 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 27-SEP-2002; 2002WO-US030917
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 10-APR-2003.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO2003028640-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (UYVA-)
                                                                                                                                                                                                                                                                                                                                                                                                     2003-421186/39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       420
                                                                                                                                                                                                  38;
                                                                                                                                                                                                                                                                                                                                                                            ABR62131.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VIND
                                                                                                                                                                                                                                                                                                                                                                                                                                                 DE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CATCAGCGGAGTAGTTACCCGCTCACGTTCGGTGCTGGGACACAGTTGGAAATAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCTCTTATTCTCTCACAATCAGCAGCATGGAGGCTGTAGATGCTGCCACTTATTACTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TATACCACATCCAACCTGGCTTCTGGAGTCCCTGCTCGCTTCAGTGGCGGTGGGTCTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TATGACACATCCAAACTGGCTTCTGGAGTCCCTGCTCGCTTCAGTGGCAGTGGGTCTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGTGTAAGTTACATGCACTGGTATCAGCAGAAGCCAGGATCCTCCCCCAAACCTTGGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGTATAAGTTACATGCACTGGTACCAGCAGAAGGCTGTCACCTCCCCCAAAAGATGGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CAGCAGTGGAGTCGTAGCCCACCCACGTTCGGTGCTGGCACCCAAGCTGGAAATAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCTCTTACTCTCACAGTCAGAGAGTGGAGGCTGAAGATGCTGCCACTTATTACTGC
                                                                                                                                                                                                Page
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  delivery; ligand; cancer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VANDERBILT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                antibody encoding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                  104-105; 108pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /partial
/note= "r
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
1. .726
                                                                                                                                                                                                                                                                                                                                                                                                                                                 s
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "no
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   doas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DNA #SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   codon"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  carcinoma;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  bladder;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  breast;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              716
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       714
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          539
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            479
```

Ç

```
RESULT
ADT9120
ID AI
XX
AC AI
XX
DT 16
XX
                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                Ś
                                                                                                                                                                                              밁
                                                                                                                                                                                                                    ર્શ
                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                        문
                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SSSSSSSSSSSSSSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              tumour is a primary or a metastasized tumour such as carcinoma of the bladder, breast, cervix, colorectum, lung, ovary, pancreas, prostate, stomach, cholangiocarcinoma, gastric sarcoma, glioma, lymphoma, melanoma, multiple myeloma, osteosarcoma, head and neck tumor and solid tumor. The method of the invention is useful for X-ray-guided delivery of a theorem composition, a diagnostic composition or their combinations to a tumour in a subject. The current sequence represents a single chain antibody encoding sequence that was identified following in vivo panning to irradiated tumours. This antibody binds P-selectin
                 16-DEC-2004
                                                                     ADT91206
                                                                                                                                                                                                                                                     547
                                                                                                                                                                   658
                                                                                                                                                                                              607
                                                                                                                                                                                                                        598
                                                                                                                                                                                                                                                                                                         487
                                                                                                                                                                                                                                                                                                                                     478
                                                                                                                                                                                                                                                                                                                                                                427
                                                                                                                                                                                                                                                                                                                                                                                          418
                                                                                                                                                                                                                                                                                                                                                                                                                      367
                                                                                                                                          667
                                                                                                                                                                                                                                                                              538
                                                                                                                                                                                                                                                                                                                                                                                                                                                 358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     \mathbf{\mu}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CAGGTGAAACTGCAGCAGTCAGGACCTGAACTGGTGNAGCCTGGGGGCTTCAGTGAAGATA
                                                                                                                                                          CATCAGCGGAGTAGTTACCCGCTCACGTTCGGTGCTGGGACACAGTTTGGAAATAAAACGG
                                                                                                                                                                                                                                                    TATGACA
                                                                                                                                                                                                                                                                                                                            AGTATAAGTTACATGCACTGGTACCAGCAGAAGCCTGTCACCTCCCCCAAAAGATGGATT
                                                                                                                                                                                                                                                                                                                                                                               CCAGCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGGCAGCTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                       ACTACGGTCCCGTTTGCTTACTGGGTCCAAGGGACCACGGTCACCGTCTCCTCAGGTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATGGAGCTCCGCAGCCTGACATCTGAGGATTCTGCAGTCTATTACTGTGC---AAGAGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CCTGGACAAGGCCTTGAGTGGATCGGAGCGATTGATACTTCTGATAGTTATACTAGCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TCCTGCAAGACTTCTGGANACAAATTCACTGAATACACCATGCACTGGGTGAAGCAGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CAGGTGAAACTGCAGCAGTCTGGGGCTGAGCTTGTGATGCCTGGGGCTTCAGTGAAGATG
                                                                      standard;
                                                                                                                                         CTGCAGAGGAGTAGTTACCCGTACACGTTTGGAGCTGGCACCAAGCTGGAAATCAAACGG
                                                                                                                                                                                                                 ACCTCTTATTCTCTCACAATCAGCAGCATGGAGGCTGTAGATGCTGCCACTTATTACTGC
                                                                                                                                                                                                                                                                              TATGACACATCCAAACTGGCTTCTGGAGTCCCTGCTCGCTTCAGTGGCAGTGGGTCTGGG 597
                                                                                                                                                                                                                                                                                                                                                                                                                      GGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCGGATCGGACATTGAGCTCACCCAGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TACTATAGCGCATTTGATTACTGGGGCCAAGGGACTACGGTCACCGTCTCCTCAGGTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AATCAAAAGTTCAAGGGCAAGGCCACATTGACTGTAGACGAATCCTCCAGCACAGCCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAGCAGAAGTTCAAGGGCAAGGCCACATTGACTGTAGACAAGTCCTCCAGCACAGCCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TCCTCCAAGGCTTCTGGCTACACACTCACTGACTACTGGATGCACTGGGTGAAGCAGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       726
                                                                                                                                                                                                                                                                                                         AGTGTAAGCTACATGCACTGGTTCCAGCAGAAGTCAGGCACCTCCCCCAAACCCTGGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATGCAGCTCAGCAGCCTGACATCTGAGGACTCTGCGGTCTATTACTGTGCAAGAAGAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BP; 173
               (first
                                                                     DNA;
               entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             77.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; 188 C; 202
                                                                      726
                                                                     ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 553.2; | Pred. No. 1.1e | O; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      G; 163 T; 0 U;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .1e-146;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ω
••
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                   717
                                                                                                                                                                                                                       657
                                                                                                                                                                                                                                                                                                                                   537
                                                                                                                                                                                                                                                                                                                                                                                          477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       357
                                                                                                                                       726
                                                                                                                                                                                              666
                                                                                                                                                                                                                                                    606
                                                                                                                                                                                                                                                                                                         546
                                                                                                                                                                                                                                                                                                                                                                486
                                                                                                                                                                                                                                                                                                                                                                                                                      426
                                                                                                                                                                                                                                                                                                                                                                                                                                                417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           66
```

```
28-APR-2000;
09-NOV-2001;
27-SEP-2002;
                                                                                                                                                                                                                                           Screening phage-displayed antibodies binding to radiation-inducible neoantigen on cell, comprises contacting cell with antibodies, treat cell with radiation, contacting cell with antibodies not binding to detecting bound antibody.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Tumour; benign intracranial meningioma; arteriovenous malformation; angioma; macular degeneration; melanoma; adenocarcinoma; malignant glioma; prostatic carcinoma; kidney carcinoma; bladder carcinoma; pancreatic carcinoma; thyroid carcinoma; blung carcinoma; pancreatic carcinoma; thyroid carcinoma; lung carcinoma; colon carcinoma; rectal carcinoma; brain carcinoma; liver carcinoma; braest carcinoma; ovary carcinoma; angiofibroma; retrolental fibroplasia; haemangioma; Kaposi's sarcoma; single chain variable fragment; scFv; gene; ds.
                                                                                                                                                                                                                     Claim 4; SEQ ID NO 17; 64pp; English.
                                                                                                                                                                                                                                                                                                  P-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                        20-OCT-2003;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Unidentified
                                                                                                                                                                                                                                                                                                                                                        (UYVA-)
                                                                                                                                                                                                                                                                                                                                                                                                                                               30-SEP-2004.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US2004191249-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Single chain variable fragment (scFv) antibody encoding DNA
                                                                                                                                                                                                                                                                                                            2004-698661/68
                                                                                                                                                                                                                                                                                                                                                        VIND
                                                                                                                                                                                                                                                                                                  ADT91207
                                                                                                                                                                                                                                                                                                                                  Œ,
                                                                                                                                                                                                                                                                                                                                                                             2000WO-US011485
2001US-00914605
2002US-00259087
                                                                                                                                                                                                                                                                                                                                                        VANDERBILT.
                                                                                                                                                                                                                                                                                                                                                                                                                         2003US-00689006
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1.
/*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /product=
antibody"
/partial
/note= "No
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                 æ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         "No
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "Single chain variable fragment (scFv)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         doae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         codon'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       #1
                                                                                                                                                                                                                                                                 treating
                                                                                                                                                                                                                                                       cell
```

benign intracranial meningiomas, arteriovenous malformation, angioma, macular degeneration, melanoma, adenocarcinoma, malignant glioma, prostatic carcinoma, kidney carcinoma, bladder carcinoma, pancreatic carcinoma, thyroid carcinoma, lung carcinoma, colon carcinoma, rectal carcinoma, brain carcinoma, liver carcinoma, breast carcinoma, ovary carcinoma, solid tumours, solid tumour metastrases, angiofibromas, retrolental fibroplasias, haemangiomas, Kaposi's Barcoma, head and neck carcinomas and their combinations or vascular endothelial cell. The present sequence is a DNA encoding single chain variable fragment (scFv) antibody that binds to radiation-inducible neoantigens. The invention relates to a method for screening phage-displayed antibodies binding to radiation-inducible necessitigen on cell. The method involves contacting cell with antibodies, treating cell with radiation, contacting cell with antibodies not binding to cell and detecting the bound antibody. The method is useful for screening several phagebound antibodies for an ability to bind to a radiation-inducible necessitigen present on a cell, where the cell is tumour cell chosen from The method

```
Sequence
726
BP; 173
A; 188
Ç
202 G; 163 T; 0 U;
0 Other;
```

```
밁
                  á
                                        Matches
                                                 Query Match
Best Local (
                                        622;
                                                  Similarity
                  CAGGTGAAACTGCAGCAGTCAGGACCTGAACTGGTGNAGCCTGGGGGCTTCAGTGAAGATA
CAGGTGAAACTGCAGCAGTCTGGGGGCTGAGCTTGTGATGCCTGGGGGCTTCAGTGAAGATG
                                                 77.2%;
86.4%;
                                       °
                                       Pred. No. 1.10); Mismatches
                                                            Score
                                    .2; DB 13;
1.1e-146;
                                       Indels
                                       ų.
                     60
66
                                       ۲
```

```
RESULT 14
AAZ2963
ID 28963
XX AAZ26
AC AAZ26
XX DT 07-FE
XX Anti
XX Anti
XX Anti
XX Anti
XX Endo
DE Onti
XX On
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       뮹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                     Anti-hepatitis B surface antigen (4C2) scPV; single chain FV; light chain constant region; mouse antibody IC3; mutation; DN ribosome display; replicable mRNA; replication; translation; continuous in vitro evolution; CIVE; mutant protein; diagnost
                                                                                                                                                                                                                                                                                                                                                                                                                              AAZ28963
                                                  08-MAY-1998;
                                                                                    07-MAY-1999;
                                                                                                                     18-NOV-1999
                                                                                                                                                      WO9958661-A1
                                                                                                                                                                                                                       therapeutic property;
                                                                                                                                                                                                                                                                                                                                                           07-FEB-2000
                                                                                                                                                                                                                                                                                                                           Anti-Hepatitis
                   (DIAT-) DIATECH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                658
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATGGAGCTCCGCAGCCTGACATCTGAGGATTCTGCAGTCTATTACTGTGC----AAGAGAT
                                                                                                                                                                                                                                                                                                                                                                                                                              standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCAGCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGGCAGCTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGCGGTTCAGGCGGAGGTGGCCTCTGGCGGTGGCGGATCGGACATCGAGCTCACTCTCAGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACTACGGTCCCGTTTGCTTACTGGGTCCAAGGGACCACGGTCACCGTCTCCTCAGGTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAGCAGAAGTTCAAGGGCAAGGCCACATTGACTGTAGACAAGTCCTCCAGCACAGCCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCCTGCAAGACTTCTGGANACAAATTCACTGAATACACCATGCACTGGGTGAAGCAGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTGCAGAGGAGTAGTTACCCGTACACGTTTGGAGCTGGCACCAAGCTGGAAATCAAACGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CATCAGCGGAGTAGTTACCCGCTCACGTTCGGTGCTGGGACACAGTTGGAAATAAAACGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCTCTTATTCTCTCACAATCAGCAGCATGGAGGCTGTAGATGCCGCCACTTATTACTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TATGACACATCCAAGCTGGCTTCTGGAGTCCCAGATCGCTTCAGTGGCAGTGGGTCTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TATGACACATCCAAACTGGCTTCTGGAGTCCCTGCTCCAGTGGCAGTGGCGTCTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGTGTAAGCTACATGCACTGGTTCCAGCAGAAGTCAGGCACCTCCCCCAAACCCTGGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGTATAAGTTACATGCACTGGTACCAGCAGCAGAAGCCTGTCACCTCCCCCAAAAGATGGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCAACAACCATGGCTGCATCTCCAGGAGAGAAGGTCACCATCACCTGCCGTGCCAGCTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCGGATCGGACATTGAGCTCACCCAGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TACTATAGCGCATTTGATTACTGGGGCCAAGGGACTACGGTCACCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATGCAGCTCAGCAGCCTGACATCTGAGGACTCTGCGGTCTATTACTGTGCAAGAAGAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AATCAAAAGTTCAAGGGCAAGGCCACATTGACTGTAGACGAATCCTCCAGCACAGCCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCTGGACAAGGCCTTGAGTGGATCGGAGCGATTGATACTTCTGATAGTTATACTAGCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCCTGCAAGGCTTCTGGCTACACATTCACTGACTACTGGATGCACTGGGTGAAGCAGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCTCTTATTCTCTCACAATCAGCTCCATGGAGGCTGAAGATGCTGCTACTTATTACTGT
                                                                                                                                                                                                                                                                                                                                                             (first
                                                                                                                                                                                                                                                                                                                           Ø
                                                  98AU-00003445
                                                                                    99WO-AU000341
                   ΥT
                                                                                                                                                                                                                                                                                                                           surface
                                                                                                                                                                                                                                                                                                                                                                                                                              DNA;
                   TTD
                                                                                                                                                                                                                                                                                                                                                           entry)
                                                                                                                                                                                                                                                                                                                                                                                                                              807
                                                                                                                                                                                                                                                                                                                          antigen
                                                                                                                                                                                                                                                                                                                                                                                                                              ВP
                                                                                                                                                                                                                                                                                                                           (4C2)
                                                                                                                                                                                                                                         mutant protein; diagnostic
                                                                                                                                                                                                                                                                                                                           BCFV
                                                                                                                                                                                                                                                                                                                          encoding
                                                                                                                                                                                                                                                                                                                           DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CTCCTCAGGTGGA
                                                                                                                                                                                                                                                                          DNA construct;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         멍
                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                        문
                                                                                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              맑
                                    밁
                                                             5
                                                                                                    문
                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local S
Matches 610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Example
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ō,
                                                                                                                                                                                                                                                                                                                                                                              370
                                                                                                                                                                                                                                                                                                                                                                                                                                               310
                                    670
                                                                                                                                                                      550
                                                                                                                                                                                                        542
                                                                                                                                                                                                                                                                          482
                                                                                                                                                                                                                                                                                                            430
                                                                                                                                                                                                                                                                                                                                           422
                                                                                                                                                                                                                                                                                                                                                                                                            362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        610;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                    ACTGGAGTAGTAACCCTCCCACGTTCGGTGCTGGGACCAAGCTGGAAATAAAACGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         807 BP; 201 A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Hudson
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Fig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               vitro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5d;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          78pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               evolution
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     76.4%;
85.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Iliades
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         207 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 547.6; DB
Pred. No. 4.3e-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ָּט
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 proteins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Irving
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 γ̈́
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          106;
```

mutation, synthesis

The present sequence is a DNA encoding anti-hepatitis B surface antigen (4C2) scFv. It can be fused upstream of the DNA encoding light chain constant region of mouse antibody 1C3 or other gene of interest in a DNA construct, for ribosome display. The DNA construct is generated for producing replicable mRNA molecules that are used in continuous cyclic process of replication, mutation, and translation leading to continuous in vitro evolution (CIVE) of mutant proteins. This method is useful for generating proteins with improved diagnostic and therapeutic properties

217 G; 182 T; 0 U; ; DB 3; 0 Other; Length

2 AGGTGAAACTGCAGCAGTCAGGACCTGAACTGGTGAAGCTTGAGGGCTTCAGTGAAGATAT CCTGCAAGGGTTCCGGCTACACATTCACTGATTATGCTATGCATTGGGTGAAGCAGAGTC ATGTGAAGCTTCAGGAGTCAGGGCCTGAGCTGGTGAGGCCCGGGGTCTCAGTGAAGATTA Indels 0, Gaps 69 181 129 121 61 189

AGCGGAGTAGTTACCCGCTCACGTTCGGTGCTGGGACACAGTTGGAAATAAAACGG CTTATTCTCTCACAATCAGCAGCATGGAGGCTGTAGATGCTGCCACTTATTACTGCCATC ACACATCCAAACTGGCTTCTGGAGTCCCTGCTCGCTTCAGTGGCAGTGGGTCTGGGACCT ACACATCCAAACTGGCTTCTGGAGTCCCTGCTTCAGTGGCAGTGGGTCTGGGACCT TCAGGTACGTGCACTGGTACCAACAGAAGTCAGGCACCTCCCCCAAAAGATGGATTTATG TAAGTTACATGCACTGGTACCAGCAGAAGAGCCTGTCACCTCCCCCAAAAGATGGATTTATG CAATCATGTTCGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGCCAACTCACGTG CAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGGCAGCTCAAGTA ACTGGTCCTTCGATGTCTGGGGGCCAAGGGACCACGGTCACCGTCTCCTCAGGTGGAGGCG CGGTCCCGTTTTGCTTACTGGGTCCAAGGGACCACCGTCACCGTCTCCTCAGGTGGAGGCG TGGAGCTCCGCAGCCTGACATCTGAGGATTCTGCAGTCTATTACTGTGCAAGAGATACTA AGCAGAAGTTCAAGGGCAAGGCCACATTGACTGTAGACAAGTCCTCCAGCCACAGCCTACA ATGCCAAGAGTCTAGAGTGGATTGGACTTATTAGTAATTCCTTTGGTAATACAAACTACA GTTCAGGCGGAGGTGGCTCTGGCGGTGGCGGATCGGACATTGTGCTGACCCAATCTCCAG TGGAACTTGGCAGATTGACATCTGAGGATTCTGCCATCTATTACTGTGCAAGAGTGATCG **ACCAGAAGTTTGAGGCCAAGGCCACAATGACTGTAGACAAATCCTCCAACACAGGCTATT** CTCACTCTCACAATCAGCAGCTTGGAGGCTGAAGATGCTGCCACTTATTACTGCCAGC 717 549 481 369 361 309 301 249 241 999 661 509 601 541 489 429 421

٠,

```
CC with a translation system, forming a population of mutant protein/mRNA CC complexes and selecting one or more complex(es) by exposing the population of mutant protein/mRNA complexes to the target molecule and CC population of mutant protein/mRNA complexes to the target molecule and CC recovering the bound mutant protein/mRNA complexes). Also included are a CD DNA construct (comprising an untranslated region including a control CC element which promotes transcription of the DNA into mRNA and a ribosome CC binding site, a cloning site location downstream of the untranslated CC region, and a replicase binding sequence located upstream of the cloning CC length, and where the construct does not comprise a sequence corresponding to a full length naturally occurring RNA template chosen CC corresponding to a full length naturally occurring RNA template chosen CC is chosen from Obeta replicase, Hepatitis C RNA-directed RNA polymerase (NS5B), Vesicular Stomatitis Virus RNA-directed RNA polymerase CC whosen from RQ135 RNA, MDV-1 RNA, microvariant RNA, nanovariant RNA, independent CC chosen from RQ135 RNA, MDV-1 RNA, microvariant RNA, nanovariant RNAs, CT-C chosen from RQ135 RNA, MDV-1 RNA, microvariant RNA, nanovariant RNAs, CT-C chosen from RQ135 RNA, MDV-1 RNA, microvariant RNA, nanovariant RNAs, CT-C chosen from RQ135 RNA, MDV-1 RNA, including a control element which CC molecule (e.g. an immunoglobulin constant region, preferably a constant CC molecule (e.g. an immunoglobulin constant region, preferably a constant constant grame of the open reading frame. The method, referred to as CIVE (continuous invited molecule and constant second stemloop structure is a replicase binding sequence. A second stemloop structure is included downstream of the open reading frame. The method, referred to as CIVE (continuous invited molecule and control to as court of the continuous invited molecule and selecting a protein which binds to a target molecule, or producing and selecting a protein which binds to a target molecule, or produc
                 The invention relates to mutating, synthesising and selecting a protein which binds to a target molecule, comprising incubating replicable a mRN molecule encoding the protein with ribonucleoside triphosphate precurso of RNA and an RNA-directed RNA polymerase, where the polymerase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Producing mut
protein with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human; antibody; glycophorin; ScFV; ds; continuous in-vitro evo. CIVE; RNA-directed RNA polymerase; ribosome binding site; untranslated region; replicase binding sequence; MDV-1; RQ135; Obeta replicase; Hepatitis C RNA-directed RNA polymerase; NS5B;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  numan; antibody; glycophorin; CIVE; RNA-directed RNA polymer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  replicates mRNA molecule and introduces mutations,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Disclosure; SEQ ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              03-MAR-2004;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 directed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      03-MAR-2004;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  25-MAR-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AU2004200867-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADS08281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2004-616324/60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           anti-hepatitis surface
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ָש'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DIATECH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             mutant protein, by incubating replicable mRNA molecule en
ith ribonucleoside triphosphate precursors of RNA and RNA-
RNA polymerase, incubating mutants with translation system
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Hudson
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2004AU-00200867
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2004AU-00200867.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       YTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NO 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GLI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               79pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       antigen antibody
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (SCFV)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      incubating the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               in-vitro evolution;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4C2,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               system,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            precursors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 stemloop;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       encoding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               and
```

```
Ś
                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 និនិនិនិនិនិនិ
                 5
                                                 밁
                                                                                                    맑
                                                                                                                        5
                                                                                                                                                       맑
                                                                                                                                                                              ş
                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                 멼
                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       surface antigen, f
the method of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    molecule, a protein, a receptor, a cell surface molecule, a metabolite, an antibody, a hormone, bacterium and a virus. The present sequence is a DNA encoding a single chain antibody (ScFV) for glycophorin or hepatitis surface antigen, for use as the protein binding the target molecule in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        mutant protein of interest. The target molecule
                                                   610
                                                                                                      550
                                                                                                                                                                                                                                                             370
670
                        662
                                                                           602
                                                                                                                            542
                                                                                                                                                       490
                                                                                                                                                                                 482
                                                                                                                                                                                                          430
                                                                                                                                                                                                                                   422
                                                                                                                                                                                                                                                                                      362
                                                                                                                                                                                                                                                                                                               310
                                                                                                                                                                                                                                                                                                                                         302
                                                                                                                                                                                                                                                                                                                                                                 250
                                                                                                                                                                                                                                                                                                                                                                                         242
                                                                                                                                                                                                                                                                                                                                                                                                                   190
                                                                                                                                                                                                                                                                                                                                                                                                                                            182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              610;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCTGCAAGACTTCTGGANACAAATTCACTGAATACACCATGCACTGGGTGAAGCAGAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 807
 ACTGGAGTAGTAACCCTCCCACGTTCGGTGCTGGGACCAAGCTGGAAATAAAACGG
                      AGCGGAGTAGTTACCCGCTCACGTTCGGTGCTGGGACACAGTTGGAAATAAAACGG
                                                   CTCACT
                                                                 CTTATTCTCTCACAATCAGCAGCATGGAGGCTGTAGATGCTGCCACTTATTACTGCCATC
                                                                                                                              ACACATCCAAACTGGCTTCTGGAGTCCCTGCTCGCTTCAGTGGCAGTGGGTCTGGGACCT
                                                                                                                                                         TCAGGTACGTGCACTGGTACCAACAGAAGTCAGGCACCTCCCCCAAAAGATGGATTTATG
                                                                                                                                                                                 TAAGTTACATGCACTGGTACCAGCAGAAGCCTGTCACCTCCCCCAAAAGATGGATTTATG
                                                                                                                                                                                                          CAATCATGTTCGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGCCAACTCACGTG
                                                                                                                                                                                                                                    CAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGGCAGCTCAAGTA
                                                                                                                                                                                                                                                                                       ACTGGTCCTTCGATGTCTGGGGCCAAGGGACCACGGTCACCGTCTCCTCAGGTGGAGGCG
                                                                                                                                                                                                                                                                                                                              CGGTCCCGTTTGCTTACTGGGTCCAAGGGACCACGGTCACCGTCTCCTCAGGTGGAGGCG
                                                                                                                                                                                                                                                                                                                                                                  TGGAACTTGGCAGATTGACATCTGAGGATTCTGCCATCTATTACTGTGCAAGAGTGATCG
                                                                                                                                                                                                                                                                                                                                                                                TGGAGCTCCGCAGCCTGACATCTGAGGATTCTGCAGTCTATTACTGTGCAAGAGATACTA
                                                                                                                                                                                                                                                                                                                                                                                                                    ACCAGAAGTTTGAGGCCAAGGCCACAATGACTGTAGACAAAATCCTCCAACACAGGCTATT
                                                                                                                                                                                                                                                                                                                                                                                                                                   AGCAGAAGTTCAAGGGCAAGGCCACATTGACTGTAGACAAGTCCTCCAGCACAGCCTACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATGCCAAGAGTCTAGAGTGGATTGGACTTATTAGTAATTCCTTTGGTAATACAAACTACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCTGCAAGGGTTCCGGCTACACATTCACTGATTATGCTATGCATTGGGTGAAGCAGAGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATGTGAAGCTTCAGGAGTCAGGGCCTGAGCTGGTGAGGCCCGGGGTCTCAGTGAAGATTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGGTGAAACTGCAGCAGTCAGGACCTGAACTGGTGNAGCCTGGGGCTTCAGTGAAGATAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        76.4%;
85.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 547.6;
Pred. No. 4.3e
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4.3e-145;
ches 106;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ή,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ģ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        is chosen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Other
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              <u>.</u>
                                                   669
                                                                            661
                                                                                                      609
                                                                                                                              601
                                                                                                                                                       549
                                                                                                                                                                                 541
                                                                                                                                                                                                          489
                                                                                                                                                                                                                                 481
                                                                                                                                                                                                                                                                                    421
                                                                                                                                                                                                                                                                                                               369
                                                                                                                                                                                                                                                                                                                                       361
                                                                                                                                                                                                                                                                                                                                                                 309
                                                                                                                                                                                                                                                                                                                                                                                          301
                                                                                                                                                                                                                                                                                                                                                                                                                   249
                                                                                                                                                                                                                                                                                                                                                                                                                                              241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                             429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
```

Search completed: February 18, 2005, 20:38:19 Job time : 424.878 secs

,		
,		

```
Title:
Perfect score:
Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Database::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OM nucleic -
             Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
         715
590.4
590.4
590.4
5947.6
534.2
534.2
534.2
532.6
532.6
532.6
532.6
532.6
532.6
532.6
532.6
532.6
532.6
532.6
532.6
532.6
532.6
532.6
532.6
532.6
532.6
532.6
532.6
532.6
532.6
532.6
532.6
532.6
532.6
532.6
532.6
532.6
532.6
532.6
532.6
532.6
532.6
532.6
532.6
532.6
532.6
532.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
632.6
6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         length: 0
length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Issued_Patents_NA:*

1: /cgn2_6/ptodata/1/ina/5A_COMB.seq:*

2: /cgn2_6/ptodata/1/ina/5B_COMB.seq:*

3: /cgn2_6/ptodata/1/ina/6A_COMB.seq:*

4: /cgn2_6/ptodata/1/ina/6B_COMB.seq:*

5: /cgn2_6/ptodata/1/ina/PCTUS_COMB.seq:*

6: /cgn2_6/ptodata/1/ina/backfIles1.seq:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query
Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      February 18, 2005, 20:10:40 ; Search time 148.31 Seconds (without alignments) 7910.513 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IDENTITY_NUC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1202784 seqs, 818138359 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-075-947A-1
717
         $99.7

$82.9

$82.9

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$72.0

$7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               caggtgaaactgcagtc.....cacagttggaaataaaacgg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length
         DB
   US-09-142-974B-1
US-09-173-633-5
US-09-581-345-1
US-09-581-345-1
US-09-526-738A-1
US-09-526-738A-1
US-09-526-738A-2
US-09-526-738A-2
US-09-526-738A-2
US-09-486-814A-1
US-09-486-814A-1
US-08-653-497A-25
US-08-653-497A-27
US-08-653-497A-27
US-08-553-497A-21
US-08-553-497A-21
US-08-553-497A-21
US-08-553-497A-21
US-08-553-497A-21
US-08-553-497A-21
US-08-553-497A-21
US-08-553-497A-23
US-09-188-082-15
US-09-188-082-15
US-09-188-082-15
US-09-188-082-15
US-09-188-082-15
US-09-188-082-15
US-09-423-439-43
US-09-423-439-50
US-09-553-498-7
US-09-553-498-7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ħ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2405568
Sequence 1, Appli
Sequence 5, Appli
Sequence 1, Appli
Sequence 1, Appli
Sequence 1, Appli
Sequence 2, Appli
Sequence 2, Appli
Sequence 2, Appli
Sequence 25, Appli
Sequence 25, Appli
Sequence 10, Appli
Sequence 10, Appli
Sequence 11, Appli
Sequence 11, Appli
Sequence 11, Appli
Sequence 12, Appli
Sequence 15, Appli
Sequence 17, Appli
Sequence 17, Appli
Sequence 23, Appli
Sequence 43, Appli
Sequence 43, Appli
Sequence 43, Appli
Sequence 43, Appli
Sequence 7, Appli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      717
```

					•		
•	B 8	g &	g Q	¥ ¤ O	RESULT 1 US-09-142-974B-1 Sequence 1, Applicati Patent No. 6451995 GENERAL INFORMATION: APPLICANT: Cheung, APPLICANT: Larson, APPLICANT: Edou, Hor APPLICANT: Sadelair TITLE OF INVENTION: FILE REFERENCE: MSN CURRENT APPLICATION CURRENT FILING DATE: PRIOR FILING DATE: PRIOR FILING DATE: PRIOR APPLICATION NUMBER OF SEQ ID NO.1 LENGTH: 717 TYPE: DNA ORGANISM: Murine FEATURE: OTHER INFORMATION: NAME/KEY: unsure LOCATION: (79) US-09-142-974B-1		
				Query Ma Best Loo Matches	SULT 1 Sequence 1 Sequence 1 Sequence 1 Sequence 1 APPLICANT APPLICANT APPLICANT APPLICANT TITLE OF TITLE TYPE: DAM ORGANISM ORGA		22250000000000000000000000000000000000
:	121 121	61	بر بر	atch cal 71	O9-142-974B-1		425.6 424.4 409.2 403.2 403.2 400.3 400 397 396.8 386.8 386.8 381 380.2 380.2 377.2
,	CATG	TCCTG	CAGG	Simil [7; C	9748-1 1, Applica 1, Applica 1, Applica 1, Applica 1, Applica 1, Cheung 1, Cheung 1, Larson 1, Larson 1, Larson 1, Larson 1, Larson 1, Application 1, Applic		044000000000000000000000000000000000000
	GAAAG GAAAG	GCAAC	TGAAJ	larity Conser	1 Application 1 Application 1 Application 1 6451995 1 FORMATION: 1 Cheung, Na 1 Namion: 1 Nami		0 0 0 F 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6
	AGCC1	ACTTO	CTGC!	vati	-974B-1 -974B-1 NO. 6451995 INFORMATION: ANT: Cheung, Nai-KongANT: Cheung, Steven PANT: Guo, Hong-Fen PANT: Guo, Hong-Fen PANT: RIVIIN, Ken Cor INVENTION: Single OF INVENTION: Single OF INVENTION UMBER: 1991-103 TAPPLICATION NUMBER: 1998-11LING DATE: 1998-171LING DATE: 1998-171LING DATE: 1998-171LING DATE: 1998-171LING DATE: 1998-171LING DATE: 1997-03 FILLING DATE: 1996-03 FOLD NOS: 5 FO		786 883 883 738 777 777 771 771 771 770 720 720 720 777
2	TGAGI	TGGAL	GCAG	99.7 <b>%</b> ; 100.0 <b>%</b> ; 1ve			00000000000000000000000000000000000000
	GGATT	VACAA	CAGG	sco Pr	09142974B  ng V. M. M.  El  cChain FV Consocies  USNP -09-18 -09-18 -07/US97/04427 -09-18 -20 60/013,703 3-20  cFV	Ł	US-01 US-01 US-01 US-11 US-11 US-11 US-11 US-11 US-11 US-11
	GGAGO	TTCAC	CCTG	re 715; ed. No. 3 Mismatche	4B 1 FV CO1 1/142,9 1/7044 1,703	AL I GNMENTS	000000000000000000000000000000000000000
	TATTI	TGAA:	ACTG	ю · D	Construct ,,974B	STYS	-08-635-928-31 -09-184-658-7 -09-504-262D-7 -08-956-047-246-7 -10-096-246A-7 -10-096-246A-5 -10-096-246A-5 -10-096-246A-6
	ATCC:	TACAC	GTGNA	3; e-19	<b>o</b>		31 15 16 16 16 17 16 16 17 16 16 17 17 18 18 18 18 18 18 18 18 18 18 18 18 18
	FAACA	CATGO	GCCIG GCCIG	Length 8; Inde	£ Ant		
	ATGGAAAGAGCCTTGAGTGGATTGGÁGGTATTAATCCTTAACAATGGTGG 	ACTGG       ACTGG		71 18	i-Gan		
	GGTAC	GTGAA       GTGAA	TCAGT	7;	Anti-Ganglioside		Sequence
	ätggaaagagccttgagtggattggäggtattaatcctaacaatggtggtactaactac 	CAAGACTTCTGGANACAAATTCACTGAATACACCATGCACTGGGTGAAGCAGAG 	AGGTGAAACTGCAGCAGTCAGGACCTGAACTGGTGNAGCCTGGGGCTTCAGTGAAGATA 	Gap			334477066655772773
, 1	р р	GC 120 	TA 60	ĬŠ.	GD2	•	Appli Appli
•	80	0 0		0;			

S

181 AAGCAGAAGTTCAAGGGCAAGGCCACATTGACTGTAGACAAGTCCTCCAGCACAGCCTAC 240

```
APPLICANT: Cheung, Nai-Kong V.
APPLICANT: Larson, Steven M.
APPLICANT: Guo, Hong-Fen
APPLICANT: Rivlin, Ken
APPLICANT: Rivlin, Ken
APPLICANT: Sadelain, Michel
TITLE OF INVENTION: Single Chain FV Construc
TITLE OF INVENTION: Antibodies
FILE REFERENCE: MSK.P-013-USNP
CURRENT APPLICATION NUMBER: US/09/142,974B
CURRENT APPLICATION NUMBER: US/09/142,974B
CURRENT FILING DATE: 1998-09-18
PRIOR APPLICATION NUMBER: PCT/US97/04427
PRIOR FILING DATE: 1997-03-20
PRIOR APPLICATION NUMBER: 60/013,703
PRIOR FILING DATE: 1996-03-20
NUMBER OF SEQ ID NOS: 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 2
US-09-142-974B-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5
                                                      NAME/KEY: unsure
LOCATION: (37)
NAME/KEY: unsure
LOCATION: (79)
S-09-142-974B-3
                                                                                                                                                                                                SOFTWARE:
SEQ ID NO 3
                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 3, Application US/09142974B Patent No. 6451995
  Query Match 99.7%; Score 715; DB 3; L
Best Local Similarity 100.0%; Pred. No. 4.3e-198;
Matches 717; Conservative 0; Mismatches 0;
                                                                                                                                                   LENGTH: 1176
TYPE: DNA
ORGANISM: Murine
                                                                                                                               OTHER INFORMATION:
                                                                                                                                             FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      241
                                                                                                                                                                                                                PatentIn Ver.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACGGTCCCGTTTGCTTACTGGGTCCAAGGGACCACCGTCACCGTCTCCTCAGGTGGAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATGGAGCTCCGCAGCCTGACATCTGAGGATTCTGCAGTCTATTACTGTGCAAGAGATACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGCAGAAGTTCAAGGCCAAGGCCACATTGACTGTAGACAAGTCCTCCAGCACAGCCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CAGCGGAGTAGTTACCCGCTCACGTTCGGTGCTGGGACACAGTTGGAAATAAAACGG 717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GACACATCCAAACTGGCTTCTGGAGTCCCTGCTCGCTTCAGTGGCAGTGGGTCTGGGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATAAGTTACATGCACTGGTACCAGCAGAAGCCTGTCACCTCCCCCAAAAGATGGATTTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGGCAGCTCAAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATGGAGCTCCGCAGCCTGACATCTGAGGATTCTGCAGTCTATTACTGTGCAAGAGATACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CAGCGGAGTAGTTACCCGCTCACGTTCGGTGCTGGGACACAGTTGGAAATAAAACGG 717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCTTATTCTCTCACAATCAGCAGCATGGAGGCCTGTAGATGCTGCCACTTATTACTGCCAT 660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GACACATCCAAACTGGCTTCTGGAGTCCCTGCTCGCTTCAGTGGCAGTGGGTCTGGGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGGCAGCTCAAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACGGTCCCGTTTGCTTACTGGGTCCAAGGGACCACGGTCACCGTCTCCTCAGGTGGAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCTTATTCTCTCACAATCAGCAGCATGGAGGCTGTAGATGCTGCCACTTATTACTGCCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATAAGTTACATGCACTGGTACCAGCAGAAGCCTGTCACCTCCCCCAAAAAGATGGATTTAT
                                                                                                                             5F11-scFv-streptavidin
                                                                                                                                                                                                                                                                                                                                                        FV Constructs
                                                                                                                                                                                                                                                                                                                                                        0f
                             Length 1176;
                                                                                                                                                                                                                                                                                                                                                     Anti-Ganglioside
٥,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             540
  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                 RESULT 3
US-09-473-653-5
                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  γQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  몽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 멼
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                     Sequence 5, Application US/09473653
Patent No. 6703015
GENERAL INFORMATION:
                                                                                                                          CURRENT APPLICATION NUMBER: US/09/473,653
CURRENT FILING DATE: 1999-12-29
PRIOR APPLICATION NUMBER: 60/152,417
PRIOR FILING DATE: 1999-11-03
NUMBER OF SEQ ID NOS: 24
                                                                                                                                                                                               APPLICANT: Solomon, Bek
APPLICANT: Frenkel, Dan
TITLE OF INVENTION: IMV
FILE REFERENCE: 00/2078
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                301
                                                                                                                                                                                                                                                                                                                                                                                                                601
                                                                                                                                                                                                                                                                                                                                                                                                                                         601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61
                                                                                                                PatentIn version 3.0
                                                                                                                                                                                                  00/20785
    scFv 508F construct
                                                                                                                                                                                                               IMMUNIZATION AGAINST
```

```
SOFTWARE: PatentIn vers
SEQ ID NO 5
LENGTH: 717
TYPE: DNA
ORGANISM: Artificial seq
FEATURE:
FEATURE:
LOCATION: ()...()
OTHER IMPORMATION: scFv
US-09-473-653-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      481 ATAAGTTACATGCACTGGTACCAGCAGAAGCCTGTCACCTCCCCCCAAAAGATGGATTTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CAGGTGAAACTGCAGCAGTCAGGACCTGAACTGGTGNAGCCTGGGGCTTCAGTGAAGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCTTATTCTCACAATCAGCAGCATGGAGGCTGTAGATGCTGCCACTTATTACTGCCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GACACATCCAAACTGGCTTCTGGAGTCCCTGCTCGCTTCAGTGGCAGTGGGTCTGGGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GACACATCCAAACTGGCTTCTGGAGTCCCTGCTCGCTTCAGTGGCAGTGGGTCTGGGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATAAGTTACATGCACTGGTACCAGCAGAAGCCTGTCACCTCCCCAAAAGATGGATTTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGGCAGCTCAAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGGCAGCTCAAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACGGTCCCGTTTGCTTACTGGGTCCAAGGGACCACGGTCACCGTCTCCTCAGGTGGAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACGGTCCCGTTTGCTTACTGGGTCCAAGGGACCACGGTCACCGTCTCCTCAGGTGGAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATGGAGCTCCGCAGCCTGACATCTGAGGATTCTGCAGTCTATTACTGTGCAAGAGATACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATGGAGCTCCGCAGCCTGACATCTGAGGATTCTGCAGTCTATTACTGTGCAAGAGATACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAGCAGAAGTTCAAGGGCCAAGGCCACATTGACTGTAGACAAGTCCTCCAGCACAGCCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAGCAGAAGTTCAAGGGCAAGGCCACATTGACTGTAGACAAGTCCTCCAGCACAGCCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCCTGCAAGACTTCTGGANACAAATTCACTGAATACACCATGCACTGGGTGAAGCAGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCCTGCAAGACTTCTGGANACAAATTCACTGAATACACCATGCACTGGGTGAAGCAGAGC
                                                                                                                                                                                                                                                                                                      AMYLOID PLAQUES USING DISPLAY TECHNOLOGY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3 O C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  360
```

eş.

1

6

123 120 63

```
Sequence 1, Application US/09581345

; Sequence 1, Application US/09581345

; Patent No. 6809184

; GENERAL INFORMATION:

APPLICANT: Chowdhury, Partha S.

APPLICANT: Chowdhury, Partha S.

APPLICANT: The Government of the United States

APPLICANT: Department of Health and Human Services

TITLE OF INVENTION: Antibodies, Including Fv Molecules, and

TITLE OF INVENTION: Mesothelin and Methods for Their Use

FILE REFERENCE: 015280-339100US

CURRENT APPLICATION NUMBER: US/09/581,345

CURRENT FILING DATE: 2000-09-27

PRIOR APPLICATION NUMBER: WO PCT/US98/25270
                                                                                                                                                                                                                                      RESULT 4
US-09-581-345-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
Matches 646; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                              481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        361
                                                                                                                                                                                                                                                                                                                658
                                                                                                                                                                                                                                                                                                                                                    601
                                                                                                                                                                                                                                                                                                                                                                              598
                                                                                                                                                                                                                                                                                                                                                                                                         541
                                                                                                                                                                                                                                                                                                                                                                                                                                 538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             301
                                                                                                                                                                                                                                                                                               199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              646; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   _
                                                                                                                                                                                                                                                                                                              CATCAGCGGAGTAGTTACCCGCTCACGTTCGGTGCTGGGACACAGTTGGAAATAAAA
                                                                                                                                                                                                                                                                                                                                                                                                      AGTATAAGTTACATGCACTGGTACCAGCAGAAGCCTGTCACCTCCCCCAAAAGATGGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCAGCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGGCAGCTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATGGAACTTGCCAGACTGACATCTGAGGATTCTGCCATCTATTACTGTGCAAGAGGGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCAGAAGTTCAAGGGCAAGGCCACAATGACTGTAGACAAATCCTCCAGCACAGCCTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAGCAGAAGTTCAAGGGCAAGGCCACATTGACTGTAGACAAGTCCTCCAGCACAGCCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CAGGTGAAACTGCAGCAGTCAGGACCTGAACTGGTGNAGCCTGGGGCTTCAGTGAAGATA
                                                                                                                                                                                                                                                                                                                                                                  ACCTCTTATTCTCTCACAATCAGCAGCATGGAGGCTGTAGATGCTGCCACTTATTACTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCAGCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGCCAGCTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACTATGTCCTACTTGACTACTGGGGCCAAGTGACCACGGTCACCGTCTCCTCAGGTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACTACGGTCCCGTTTGCTTACTGGGTCCAAGGGACCACGGTCACCGTCTCCTCAGGTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATGGAGCTCCGCAGCCTGACATCTGAGGATTCTGCAGTCTATTACTGTGCAAGA---GAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCCTGCAAGACTTCTGGANACAAATTCACTGAATACACCATGCACTGGGTGAAGCAGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CAGGTCAAACTGCAGGAGTCAGGGGCTGAGCTGGTGAGGCCTGGGGGTCTCAGTGAAGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           82.8%; Score 593.4; DB
90.1%; Pred. No. 9e-163;
cive 0; Mismatches 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              68;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length
                                                                                                                and
                                                                                                   Affinity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         717;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ω
--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             120
                                                                                                                                                                                                                                                                                                                                                   660
                                                                                                                                                                                                                                                                                                                                                                              657
                                                                                                                                                                                                                                                                                                                                                                                                         600
                                                                                                                                                                                                                                                                                                                                                                                                                                 597
                                                                                                                                                                                                                                                                                                                                                                                                                                                              540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             297
     RESULT 5
US-09-674-677-4
19-679-674-677-4
; Sequence 4, Application US/09674677
; Patent No. 6562622
; GENERAL INFORMATION:
; APPLICANT: Coia, et al.
; TITLE OF INVENTION: CONTINUOUS IN-VITRO EVOLUTION
; FILE REFERENCE: 674537-2003
; CURRENT APPLICATION NUMBER: US/09/674,677
                                                                                                                                                                                                           문
                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                          음 성
                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-09-581-345-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR FILING DATE: 1998
NUMBER OF SEQ ID NOS: 9
SOFTWARE: PatentIn Ver.
SEQ ID NO 1
SEQ ID NO 1
LENGTH: 723
TYPE: DNA
ORGANISM: Artificial S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local S
Matches 646
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURE:
OTHER INFORMATION:
                                                                                                                                                                                                                                                                                             535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        646;
                                                                                                                                                         664
                                                                                                                                                                                  655
                                                                                                                                                                                                             604
                                                                                                                                                                                                                                        595
                                                                                                                                                                                                                                                                   544
                                                                                                                                                                                                                                                                                                                        484
                                                                                                                                                                                                                                                                                                                                                   475
                                                                                                                                                                                                                                                                                                                                                                              424
                                                                                                                                                                                                                                                                                                                                                                                                       415
                                                                                                                                                                                                                                                                                                                                                                                                                                  364
                                                                                                                                                                                                                                                                                                                                                                                                                                                            355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ш
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CAGGTGAAACTGCAGCAGTCAGGACCTGAACTGGTGNAGCCTGGGGCTTCAGTGAAGATA
                                                                                                                                                                                                                           GGGACCTCTTATTCTCTCACAATCAGCAGCATGGAGGCTGTAGATGCTGCCACTTATTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                    TGCCATCAGCGGAGTAGTTACCCGCTCACGTTCGGTGCTGGGAACACAGTTGGAAATAAA
                                                                                                                                                                                                              GGAAACTCTTACTCTCACAATCAGCAGCGTGGAGGCTGAAGATGATGCAACTTATTAC
                                                                                                                                                                                                                                                                                ATTTATGACACATCCAAACTGGCTTCTGGAGTCCCTGCTTCGCTTCAGTGGCAGTGGGTCT
                                                                                                                                                                                                                                                                                                                                       TCAAGTATAAGTTACATGCACTGGTACCAGCAGAAGCCTGTCACCTCCCCCCAAAAGATGG
                                                                                                                                                                                                                                                                                                                                                                              TCTCCAGCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGCCAGC
                                                                                                                                                                                                                                                                                                                                                                                             TCTCCAGCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGGCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCCTGCAAGACTTCTGGANACAAATTCACTGAATACACCATGCACTGGGTGAAGCAGAGC
                                                                                                                                                                                                                                                                   ATTTATGACACATCCAAACTGGCTTCTGGAGTCCCAGGTCGCTTCAGTGGCAGTGGGTCT
                                                                                                                                                                                                                                                                                                                        TCAAGTGTAAGTTACATGCACTGGTACCAGCAGAAGTCAGGCACCTCCCCCAAAAGATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CATGGAAAGAGCCTTGAGTGGATTGGACTTATTACTCCTTACAATGGTGCTTCTAGCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCCTGCAAGGCTTCTGGTTACTCATTCACTGGCTACACCATGAACTGGGTGAAGCAGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CAGGTACAACTGCAGCAGTCTGGGGCCTGAGCTGGAGAAGCCTTGGCGCTTCAGTGAAGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NOS: 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1998-11-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   82.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 590.4; DB 4;
Pred. No. 6.7e-162;
O; Mismatches 68;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           of Artificial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence: SS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BCFV
```

B र्

멍 ঠ DB DB ঠ

ঠ

714

663

723

654

603 594 543 534 483 474 423 414 363 354 303 300 243 240 183

ð

밁 S 밁 δ 밁 ş 밁 Ş 밁 S 8 ક В δ

밁

```
LENGTH: 807

TYPE: DNA
ORGANISM: Homo Sapeins
FEATURE:
NAME/KEY: misc_feature
LOCATION: (1)..(807)
OTHER INFORMATION: Sequence of
Patent No. 6562622
US-09-674-677-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CURRENT FILING DATE: 2000-12-11
PRIOR APPLICATION NUMBER: PCT/AU99/00341
PRIOR FILING DATE: 1999-05-07
PRIOR APPLICATION NUMBER: AU PP3445
PRIOR FILING DATE: 1998-05-08
NUMBER OF SEQ ID NOS: 38
SOPTMARE: PATENTIN VETSION 3.0
SEQ ID NO 4
                                                  밁
                                                                        5
                                                                                                       밁
                                                                                                                             S
                                                                                                                                                                                S
                                                                                                                                                                                                                 뮍
                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    맑
                                                                                                                                                              문
                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                           B
                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
 밁
                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity
                                                    019
                                                                             602
                                                                                                        550
                                                                                                                                   542
                                                                                                                                                              490
                                                                                                                                                                                       482
                                                                                                                                                                                                                    430
                                                                                                                                                                                                                                                                        370
                                                                                                                                                                                                                                                                                                  362
                                                                                                                                                                                                                                                                                                                                                                                                                                       190
 670
                          662
                                                                                                                                                                                                                                             422
                                                                                                                                                                                                                                                                                                                            310
                                                                                                                                                                                                                                                                                                                                                         302
                                                                                                                                                                                                                                                                                                                                                                                 250
                                                                                                                                                                                                                                                                                                                                                                                                            242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        610;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGGTGAAACTGCAGCAGTCAGGACCTGAACTGGTGNAGCCTGGGGCTTCAGTGAAGATAT
                                                                                                       ACACATCCAAACTGGCTTCTGGAGTCCCTGCTTCAGTGGCAGTGGGTCTGGGACCT
                                                                                                                                                                                                                                                                                     CGGTCCCGTTTGCTTACTGGGTCCAAGGGACCACGGTCACCGTCTCCTCAGGTGGAGGCG
 ACTGGAGTAGTAACCCTCCCACGTTCGGTGCTGGGACCAAGCTGGAAATAAAACGG
               AGCGGAGTAGTTACCCGCTCACGTTCGGTGCTGGGACACAGTTGGAAATAAAACGG
                                                    CTCACTCTCTCACAATCAGCAGCTTGGAGGCTGAAGATGCTGCCACTTATTACTGCCAGC
                                                                     CTTATTCTCTCACAATCAGCAGCATGGAGGCTGTAGATGCTGCCACTTATTACTGCCATC
                                                                                                                                                                            TAAGTTACATGCACTGGTACCAGCAGAAGCCTGTCACCTCCCCCAAAAGATGGATTTATG
                                                                                                                                                                                                                  CAATCATGTTCGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGCCAACTCACGTG
                                                                                                                                                                                                                                            CAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGGCAGCTCAAGTA
                                                                                                                                                                                                                                                                        GTTCAGGCGGAGGTGGCTGGCGGTGGCGGATCGGACATTGTGCTGACCCAATCTCCAG
                                                                                                                                                                                                                                                                                                                              ACTGGTCCTTCGATGTCTGGGGGCCAAGGGACCACGGTCACCGTCTCCTCAGGTGGAGGCG
                                                                                                                                                                                                                                                                                                                                                                                                TGGAGCTCCGCAGCCTGACATCTGAGGATTCTGCAGTCTATTACTGTGCAAGAGATACTA
                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCAGAAGTTTGAGGCCAAGGCCACAATGACTGTAGACAAATCCTCCAACACAGGCTATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGCAGAAGTTCAAGGGCAAGGCCACATTGACTGTAGACAAGTCCTCCAGCCACAGCCTACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATGCCAAGAGTCTAGAGTGGATTGGACTTATTAGTAATTCCTTTGGTAATACAAACTACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCTGCAAGGGTTCCGGCTACACATTCACTGATTATGCTATGCATTGGGTGAAGCAGAGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCTGCAAGACTTCTGGANACAAATTCACTGAATACACCATGCACTGGGTGAAGCAGAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATGTGAAGCTTCAGGAGTCAGGGCCTGAGCTGGTGAGGCCCGGGGTCTCAGTGAAGATTA
                                                                                                                                                              TCAGGTACGTGCACTGGTACCAACAGAAGTCAGGCACCTCCCCCAAAAGATGGATTTATG
                                                                                                                                                                                                                                                                                                                                                                                  TGGAACTTGGCAGATTGACATCTGAGGATTCTGCCATCTATTACTGTGCAAGAGTGATCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   76.4%;
85.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0£
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 547.6; DB Pred. No. 2e-149;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches 106;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       anti-hepatitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       surface antigen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   807;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (4C2)
725
                         717
                                                                                                                                                                                                                                            481
                                                                                                                                                                                                                                                                                                421
                                                                                                                                                                                                                                                                                                                                                      361
                                                                                                                                                                                                                                                                                                                                                                                  309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121
                                                     669
                                                                               661
                                                                                                        609
                                                                                                                                   601
                                                                                                                                                              549
                                                                                                                                                                                       541
                                                                                                                                                                                                                  489
                                                                                                                                                                                                                                                                        429
                                                                                                                                                                                                                                                                                                                            369
                                                                                                                                                                                                                                                                                                                                                                                                            301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         BCFV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
```

RESULT 6 US-09-526-738A-1

> RESULT 7 US-09-526-738A-3

Sequence 3, Application US/09526738A

ì

```
Patent No. 6630584
GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: RAMOT UNIVERSITY AUTHORITY FOR APP
APPLICANT: LTD.
TITLE OF INFORMATION: SINGLE CHAIN ANTIBODY AG
FILE REFERENCE: 1196336
CURRENT APPLICATION NUMBER: US/09/526,738A
CURRENT FILLING DATE: 2000-03-16
NUMBER OF SEO ID NOS: 9
SOFTWARE: Patentin version 3.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                               Ś
                                                                                                                                                 S
                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                   S
                                                          밁
                                                                                                                    밁
                                                                                                                                                                                문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-09-526-738A-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; SEQ ID NO 1
; LENGTH: 771
; TYPE: DNA
; ORGANISM: Humanus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 1, Application US/09526738A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches 609;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
                                                           865
                                                                                       601
                                                                                                                                                                                   478
                                                                                                                                                                                                     481 ATAAGTTACATGCACTGGTACCAGCAGAAGCCTGTCACCTCCCCCCAAAAGATGGATTTAT
                                                                                                                                                                                                                                                418
                                                                                                                                                                                                                                                                             421
                                                                                                                                                                                                                                                                                                          358
                                                                                                                                                                                                                                                                                                                                         361
                                                                                                                                                                                                                                                                                                                                                                        301
                                                                                                                                                                                                                                                                                                                                                                                                        301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 CAGGTGAAACTGCAGCAGTCAGGACCTGAACTGGTGNAGCCTGGGGCTTCAGTGAAGATA
                CAGCGGAGTAGTTACCCGCTCACGTTCGGTGCTGGGACACAGTTGGAAATAAAACGG 717
                                                                                    TCTTATTCTCTCACAATCAGCAGCATGGAGGCTGTAGATGCTGCCACTTATTACTGCCAT
                                                                                                                     AGCACATCCAACCTGGCTTCTGGAGTCCCTGCTTCAGTGGCAGTGGATCTGGGACC
                                                                                                                                                       GACACATCCAAACTGGCTTCTGGAGTCCCTGCTCGCTTCAGTGGCAGTGGGTCTGGGACC
                                                                                                                                                                                                                                                                GCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGGCAGCTCAAGT
                                                                                                                                                                                                                                                                                                          TC---TTATTTTGACTACTGGGGCCAAGGGACCACGGTCACCGTCTCCTCAGGTGGAGGC
                                                                                                                                                                                                                                                                                                                                                                                           ACGGTCCCGTTTGCTTACTGGGTCCAAGGGACCACGGTCACCGTCTCCTCAGGTGGAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                       ATGCAACTGAGCAGCCTGACCAATGTGGACTCTGCAGTCTATTATTGTACAACTGGTTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATGGAGCTCCGCAGCCTGACATCTGAGGATTCTGCAGTCTATTACTGTGCAAGAGATACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AATCAGAAGTTCAAGGACAAGGCCACATTGACTGCAGACAAATCCTTCCAGCACGCCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAGCAGAAGTTCAAGGGCAAGGCCCACATTGACTGTAGACAAGTCCTCCAGCACAGCCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCTGGACAGGGTCTGGAATGGATTGGATACATTAATCCTACCACTGGTTATACTAAGTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCCTGCAAGACTTCTGGCTACACCTTTACTAGCTACTGGATGAACTGGGTAAAACAGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TCCTGCAAGACTTCTGGANACAAATTCACTGAATACACCATGCACTGGGTGAAGAGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CAGGTCAAACTGCAGCAGTCTGGGGGCTGAACTGGCAAAACCTGGGGCCTCAGTGAAGATG
CAAAGGAGTAGTTACCCATACACGTTCGGAGGGGGCACCAAGCTGCAAATCAAACGG
                                                           TCTTACTCTCACAATCAGCCGGATGGAGGCTGAAGATGCTGCCACTTATTACTGCCAG
                                                                                                                                                                                    GTAAATTACATGCACTGGTTCCAGCAGAAGCCAGGCACTTCTCCCAAACTCTGGATTTCT
                                                                                                                                                                                                                                                GCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATAACCTGCAGTGCCAGCTCAAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    UNIVERSITY AUTHORITY FOR APPLIED RESEARCH & INDUSTRIAL DVELOPMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               74.5%;
84.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ٥.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 534.2; DB 4;
Pred. No. 1.6e-145;
0; Mismatches 105;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGAINST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MUTANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       P53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ω
--
   714
                                                                                                                          597
                                                                                                                                                       600
                                                                                                                                                                                      537
                                                                                                                                                                                                                   540
                                                                                                                                                                                                                                                                               480
                                                                                                                                                                                                                                                                                                                                            420
                                                                                                                                                                                                                                                                                                                                                                                                                                        300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60
                                                               657
                                                                                            660
                                                                                                                                                                                                                                                    477
                                                                                                                                                                                                                                                                                                              417
                                                                                                                                                                                                                                                                                                                                                                           357
                                                                                                                                                                                                                                                                                                                                                                                                          360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            120
```

```
; Patent No. 6630584
; GENERAL INFORMATION:
; APPLICANT: RAMOT UNIVERSITY AUTHORITY FOR APPLICANT: LTD.
; TITLE OF INVENTION: SINGLE CHAIN ANTIBODY AG
; FILE REFERENCE: 1196336
; CURRENT APPLICATION NUMBER: US/09/526,738A
; CURRENT FILLING DATE: 2000-03-16
; NUMBER OF SEQ ID NOS: 9
; SOFTWARE: Patentin version 3.1
; SEQ ID NO 3
; LENGTH: 780
; TYPE: DNA
; ORGANISM: Humanus
RESULT 8
US-09-798-689-22
; Sequence 22, Application US/09798689
; Patent No. 6811779
                                                                                                                문
                                                                                                                                     Ş
                                                                                                                                                                 밁
                                                                                                                                                                                   S
                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                              ર્
                                                                                                                                                                                                                                                                                                                               á
                                                                                                                                                                                                                                                                                                                                                                              á
                                                                                                                                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-526-738A-3
                                                                                          á
                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                       뫄
                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local S
Matches 609
                                                                                                                                          601
                                                                                                                                                                  544
                                                                                                                                                                                         541
                                                                                                                                                                                                                 484
                                                                                                                    604
                                                                                                                                                                                                                                                                                                                                     361
                                                                                            199
                                                                                                                                                                                                                                       481
                                                                                                                                                                                                                                                               424
                                                                                                                                                                                                                                                                                       421
                                                                                                                                                                                                                                                                                                             364
                                                                                                                                                                                                                                                                                                                                                             307
                                                                                                                                                                                                                                                                                                                                                                                     301
                                                                                                                                                                                                                                                                                                                                                                                                            247
                                                                                                                                                                                                                                                                                                                                                                                                                                   241
                                                                                                                                                                                                                                                                                                                                                                                                                                                           187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        609;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 CAGGTGAAACTGCAGCAGTCAGGACCTGAACTGGTGNAGCCTGGGGGCTTCAGTGAAGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                   GACACATCCAAACTGGCTTCTGGAGTCCCTTGCTCAGTGGCAGTGGGTCTGGGACC
                                                                                 CAGCGGAGTAGTTACCCGCTCACGTTCGGTGCTGGGACACAGTTGGAAATAAAACGG
                                                                                                                 TCTTACTCTCACAATCAGCCGGATGGAGGCTGAAGATGCTGCCACTTATTACTGCCAG
                                                                                                                                TCTTATTCTCTCACAATCAGCAGCATGGAGGCTGTAGATGCTGCCACTTATTACTGCCAT 660
                                                                                                                                                                  AGCACATCCAACCTGGCTTCTGGAGTCCCTGCTCGCTTCAGTGGCAGTGGATCTGGGACC
                                                                                                                                                                                                                 GTAAATTACATGCACTGGTTCCAGCAGAAGCCAGGCACTTCTCCCAAACTCTGGATTTCT
                                                                                                                                                                                                                              ATAAGTTACATGCACTGGTACCAGCAGAAGCCTGTCACCTCCCCCAAAAGATGGATTTAT
                                                                                                                                                                                                                                                                          GCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGGCAGCTCAAGT
                                                                                                                                                                                                                                                                                                                          ACGGTCCCGTTTGCTTACTGGGTCCAAGGGACCACGGTCACCGTCTCCCTCAGGTGGAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                        ATGGAGCTCCGCAGCCTGACATCTGAGGGATTCTGCAGTCTATTACTGTGCAAGAGATACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAGCAGAAGTTCAAGGGCAAGGCCACATTGACTGTAGACAAGTCCTCCAGCACAGCCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCTGGACAGGGTCTGGAATGGATTGGATACATTAATCCTACCACTGGTTATACTAAGTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CAGGTCAAACTGCAGCAGTCTGGGGCTGAACTGGCAAAACCTGGGGCCTCAGTGAAGATG
                                                                      CAAAGGAGTAGTTACCCATACACGTTCGGAGGGGGCACCAAGCTGCAAATCAAACGG
                                                                                                                                                                                                                                                                                                             TC---TTATTTTGACTACTGGGGCCAAGGGACCACGGTCACCGTCTCCTCAGGTGGAGGC
                                                                                                                                                                                                                                                                                                                                                                                                           ATGCAACTGAGCCTGACCAATGTGGACTCTGCAGTCTATTATTGTACAACTGGTTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                         AATCAGAAGTTCAAGGACAAGGCCACATTGACTGCAGACAAATCCTCCAGCACGGCCTAC
                                                                                                                                                                                                                                                              GCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATAACCTGCAGTGCCAGCTCAAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                74.5%;
84.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 534.2; DB 4;
Pred. No. 1.6e-145;
0; Mismatches 105;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FOR APPLIED RESEARCH & INDUSTRIAL DVELOPMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGAINST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 780;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                      720
                                                                                                                                                                                                                                       540
                                                                                                                                                                                                                                                                                     480
                                                                                                                                                                                                                                                                                                                                     420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 180
                                                                                                                                                                  603
                                                                                                                                                                                                                 543
                                                                                                                                                                                                                                                               483
                                                                                                                                                                                                                                                                                                            423
                                                                                                                                                                                                                                                                                                                                                             363
                                                                                                                                                                                                                                                                                                                                                                                   360
                                                                                                                                                                                                                                                                                                                                                                                                           306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         186
                                                                                                                                                                                                                                                                                                                                                                                                                                                         246
                           S
                                                        밁
                                                                           S
                                                                                                                        ş
                                                                                                                                                    밁
                                                                                                                                                                     ঠ
                                                                                                                                                                                             В
                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                    á
                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
```

```
CURRENT APPLICATION NUMBER: US/09/798,689
CURRENT FILING DATE: 2001-03-02
PRIOR APPLICATION NUMBER: 09/401,163
PRIOR FILING DATE: 1999-09-22
PRIOR PELICATION NUMBER: 08/967,113
PRIOR FILING DATE: 1997-11-10
PRIOR APPLICATION NUMBER: 08/706,804
PRIOR FILING DATE: 1996-09-03
PRIOR FILING DATE: 1996-09-03
PRIOR PILING DATE: 1995-06-07
PRIOR APPLICATION NUMBER: 08/476,533
PRIOR FILING DATE: 1995-06-07
PRIOR APPLICATION NUMBER: 08/326,552
PRIOR FILING DATE: 1994-02-10
NUMBER OF SEQ ID NOS: 41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ; TYPE: DNA
; ORGANISM: Mouse
US-09-798-689-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUPLE: Pate
SOFTWARE: Pate
SEQ ID NO 22
FURTH: 714
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
APPLICANT: Rockwell, Patricia
APPLICANT: Goldstein, Neil I.
TITLE OF INVENTION: Method for Reducing Tumor Growth with VEGF
TITLE OF INVENTION: Combined With Radiation and Chemotherapy
FILE REFERENCE: Sequence Listings 1-41 for 381-25 CIP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Patent No. 6811779
                                                                                                                                                                                                                                                                                                                                    301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                596;
                                                                                                           481
                                                                                                                                                     421
                                                                                                                                                                                                 421
                                                                                                                                                                                                                                                                                       361
                                                                                                                                                                                                                                                                                                                                                                              301
                                                                                                                                                                                                                                                                                                                                                                                                                          241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        μ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 CAGGTGAAACTGCAGCAGTCAGGACCTGAACTGGTGAAGCCTGGGGCCTTCAGTGAAGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
GACACATCCAAACTGGCTTCTGGAGTCCCTGCTCCGCTTCAGTGGCAGTGGGTCTGGGACC
                                                                                        ATAAGTTACATGCACTGGTACCAGCAGAAGCCTGTCACCTCCCCCAAAAGATGGATTTAT
                                                                                                                                                                              GCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGGCAGCTCAAGT
                                                                                                                                                                                                                                                                                                                                 GGTGACTACGAAGGCTACTGGGGCCAAGGGACCACGGTCACCGTCTCCTCAGGTGGAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATGGAGCTCCGCAGCCTGACATCTGAGGATTCTGCAGTCTATTACTGTGCAAGAGATACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAGCAGAAGTTCAAGGGCAAGGCCACATTGACTGTAGACAAGTCCTCCAGGACAGGCCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CAGGTCAAGCTGCAGCAGTCTGGGGCCAGAGCTTGTGGGGTCAGGGGGCCTCAGTCAAATTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PatentIn Ver.
                                                                                                                                                                                                                                                                       ACGGTCCCGTTTGCTTACTGGGTCCAAGGGACCACGGTCACCGTCTCCTCAGGTGGAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCCCCGAAGTTCCAGGGCAAGGCCACCATGACTGCAGACTCATCCTCCAACACAGCCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCTGAACAGGGCCTGGAGTGGATTGGATGGATTGATCCTGAGAATGGTGATTCTGATTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCCTGCAAGACTTCTGGANACAAATTCACTGAATACACCATGCACTGGGTGAAGCAGAGC 120
                                                                                                                                                       GCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATAACCTGCAGTGCCAGCTCAAGT
                                                                                                                                                                                                                                                                                                                                                                                                                          CTGCAGCTCAGCAGCCTGACATCTGAGGACACTGCCGTCTATTACTGTAATGCATACTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCCTGCACAACTTCTGGCTTCAACATTAAAGACTTCTATATGCACTGGGTGAAGCAGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            73.4%; ilarity 83.5%; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 526.4; DB 4;
Pred. No. 2.9e-143;
0; Mismatches 118;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Antagonists
                  600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60
                                                              540
                                                                                                        540
                                                                                                                                                     480
                                                                                                                                                                                                                                                                                     420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    300
                                                                                                                                                                                                 480
                                                                                                                                                                                                                                                                                                                                 360
                                                                                                                                                                                                                                                                                                                                                                              360
                                                                                                                                                                                                                                                                                                                                                                                                                          300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                240
```

밁 ঠ 밁 S

480

528

648 534 588

708

768

828

654

708

360

411

468

```
GENERAL INFORMATION:

APPLICANT: YAMANOTO, Masato

APPLICANT: YAMANOTO, Hiroko

APPLICANT: YAMANOTO, Hiroko

APPLICANT: YAMANOTO, Hiroko

APPLICANT: TOHDOH, Naoki

TITLE OF INVENTION: SINGLE-CHAIN ANTIBODY AGAINST HEPATITIS B VIRUS CORE

TITLE OF INVENTION: PROTEIN, GENE THEREOF, AND THERAPEUTIC AGENT FOR

TITLE OF INVENTION: HEPATITIS B CONTAINING THESE

FILE REFERENCE: 0020-4682P

CURRENT APPLICATION NUMBER: US/09/486,814A

CURRENT FILING DATE: 2002-06-13

NUMBER OF SEQ ID NOS: 14

SOFTMARE: Patentin Ver. 2.1

SEQ ID NO 1

LENGTH: 894

TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 9
US-09-486-814A-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 1, Application Patent No. 6562599
                                                                                                                                                                                                                                                                                                                         Query Match
Best Local
                                                                                                                                                                                                                                                                                                           Matches 624;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: DNA ORGANISM: Mus sp., strain: Balb/c, tissue: FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                    NAME/KEY: misc_feature
LOCATION: (1)..(894)
OTHER INFORMATION: strandedness:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME/KEY: misc feature
LOCATION: (838)..(891)
OTHER INFORMATION: Encoding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME/KEY: misc feature LOCATION: (436)..(528) OTHER INFORMATION: Encoding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NAME/KEY: misc feature
LOCATION: (1). (111)
OTHER INFORMATION: Encoding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME/KEY: CDS
LOCATION: (1)...(891)
OTHER INFORMATION: Identification Method:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OTHER INFORMATION: Clone: FEATURE:
                                                                                                                                                                                                                                                                                                       y Match 73.1%;
Local Similarity 85.6%;
nes 624; Conservative
     298
                                       181
                                                                          238
                                                                                                                  121
                                                                                                                                                       178
                                                                                                                                                                                                                                118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             601
                                                                                                                                                                                           61
                                                                                                                                                                                                                                                    1 CAGGTGAAACTGCAGCAGTCAGGACCTGAACTGGTGNAGCCTGGGGCTTCAGTGAAGATA
                       AAGCAGAAGTTCAAGGGCAAGGCCACATTGACTGTAGACAAGTCCTCCAGCACAGCCTAC
                                                                          ATGGAAAGAGCCTTGAGTGGATTGGATATTTATCCTTACAATGGTGGTACTGGCTAC
                                                                                                      TCCTGCAAGACTTCTGGANACAAATTCACTGAATACACCCATGCACTGGGTGAAGCAGAGC
                                                                                                                                                                                                                              CAGGTGAAGCTGCAGGAGTCAGGACCTGAGCTGGAGAAGCCCTGGCGCTTCAGTGAAGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CAGCGGAGTAGTTACCCGCTCACGTTCGGTGCTGGGACACAGTTGGAAATAAAA 714
                                                                                                                                                     TCCTGCAAGGCTTCTGGTTACTCATTCACTGGCTACAACATGAAGTGGGTGAAACAGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CAAAGGAGTAGTTACCCATTCACGTTCGGCTCGGGGACCAAGCTGGAAATAAAA 714
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCTTATTCTCTCACAATCAGCAGCATGGAGGCTGTAGATGCTGCCACTTATTACTGCCAT
   AACCAGAAGTTCAAGAGCAAGGCCACATTGACTGTAGACAAATCCTCCAGCACAGCCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TCTTACTCTCACAATCAGCCGAATGGAGGCTGAAGATGCTGCCACTTATTACTGCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US/09486814A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    pZeoSV1C9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              b
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRE-HV
                                                                                                                                                                                                                                                                                                       Score 523.8; DB 4;
Pred. No. 1.8e-142;
0; Mismatches 84;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TAIL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         linker
                                                                                                                                                                                                                                                                                                                                                                                                      double-stranded
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                sequence
                                                                                                                                                                                                                                                                                                                                          Length 894;
                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                       21;
                                                                                                                                                                                                                                                                                                       Gaps
                                     240
                                                                          297
                                                                                                                180
                                                                                                                                                                                         120
                                                                                                                                                                                                                                177
                                                                                                                                                                                                                                                                    60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             660
   357
                                                                                                                                                     237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 10
US-08-553-497A-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 뭉
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         뭉
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
APPLICANT: KETTLEB
APPLICANT: BENDIG,
APPLICANT: ANSELL,
APPLICANT: GUSSOW,
APPLICANT: MITJANS
APPLICANT: MITJANS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 25, Application US/08553497A Patent No. 5844093
                                                 COMPUTER READABLE FORM:
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Vers
CURRENT APPLICATION DATA;
APPLICATION NUMBER: US/08/553,497A
FILING DATE: 17-NOV-1995
                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
APPLICANT:
CLASSIFICATION: 530 PRIOR APPLICATION NUMBER: .
                                                                                                                                                                                                                                                                                                                                                              TITLE OF INVENTION: ANTI-EGFR SINGLE-CHAIN FVS AND ANTI-EGFR TITLE OF INVENTION: ANTIBODIES
                                                                                                                                                                                                                                                                                                                         CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQUENCES:
                                                                                                                                                                                                          STATE: VA
COUNTRY: U
ZIP: 22201
                                                                                                                                                                                                                                                                    STREET:
CITY: A
                                                                                                                                                                                                                                                                                                         ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           529
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  595
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 589 ATAAGTTCCAATTACTTGCATTGGTATCAGCAGAAGCCAGGATTCTCCCCCTAAACTCTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    469
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             412 --- CTGGGACTTGACTACTGGGGCCAAGGGACCACGGTCACCGTCTCCTCAGGTGGAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      358 ATGCAACTGAGCAGCCTGACATCTGAGGACTCTGCAGTCTATTACTGTGCAAGA-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         829 ATAAAACGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             709 ATAAAACGG 717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    769
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             709
                                                                                                                                                                                                                                                                    ARLINGTON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGGACCTCTTATTCTCTCACAATCAGCAGCATGGAGGCTGTAGATGCTGCCACTTATTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGGCAGTGGAGCTCAAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATGGAGCTCCGCAGCCTGACATCTGAGGATTCTGCAGTCTATTACTGTGCAAGAGATACT 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGCCATCAGCGGAGTAGTTACCCGC-----TCACGTTCGGTGCTGGGACACAGTTGGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATTTATGACACATCCAAACTGGCTTCTGGAGTCCCTGCTCCAGTGGCAGTGGGTCT 594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCACCATGGCTGCATCTCCCGGGGAGAGATCACTATCACCTGCAGTGCCAGCTCAAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACGGTCCCGTTTGCTTACTGGGTCCAAGGGACCACGGTCACCGTCTCCTCAGGTGGAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGCCAGCAGGGTAGTAGTATACCACGCATATTCACGTTCGGTGCTGGGACAAAGTTGGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGGACCTCTTACTCTCACAATTGGCACCATGGAGGCTGAAGATGTTGCCACTTACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATTTATAGGACATCCAATCTGGCTTCTGGAATCCCAGCTCGCTTCAGTGGCAGTGGGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATAAG-----
                                                                                                                                                                                                                                                                                       E: MILLEN, WHITE, ZELANO & BRANIGAN, 2200 CLARENDON BLVD. SUITE 1400
                                                                                                                                                                                                                                                                                                                                                                                                ROSELL, ELISABET
BLASCO, FRANCESC
PIULATS, JAUME
                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                           MITJANS, FRANSESC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADAN, JAUME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GUSSOW, DETLEF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KETTLEBOROUGH, C. BENDIG, MARY M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TTACATGCACTGGTACCAGCAGAAGCCTGTCACCTCCCCCAAAAGATGG
   WO PCT/EP95/00978
                                                                                                                  Version
```

밁 á 밁 S 밁 á В á

```
밁
                                                                                                                S
                                                                                                                                                   밁
                                                                                                                                                                                ş
                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                      र्
                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                б
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           á
S
                            밁
                                                      5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-08-553-497A-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEFAX: 703-243-6410
INFORMATION FOR SEQ ID NO: 2
SEQUENCE CHARACTERISTICS:
LENGTH: 726 base pairs
TYPE: nucleic acid
STRANDENNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches 613; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    IMMEDIATE SOURCE:
   CLONE: 5 F 1 (single-chain Fv, heavy, light chain,
   CLONE: linker)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FRAGMENT TYPE: I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HYPOTHETICAL: NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME: HAMLET-KING, DIANA REGISTRATION NUMBER: 33,302 REFERENCE/DOCKET NUMBER: METELECOMMUNICATION INFORMATION: TELEPHONE: 703-243-6333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE: 02-DEC-1994
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 1
FILING DATE: 17-MAR-:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM: mouse
STRAIN: Balb/c
TISSUE TYPE: splenocytes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING
                                                                                                                                                     301
                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                          121
                                                           409
                                                                                        361
                                                                                                                      349
                                                                                                                                                                                   300
                                                                                                                                                                                                                 241
                                                                                                                                                                                                                                                                                                           181
 469
                            421
                                                                                                                                                                                                                                              241
                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                                  19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -
GGCAGCTCAAGTATAAGTTACATGCACTGGTACCAGCAGAAGCCTGTCACCTCCCCCAAA 528
                                                                                                                                                                                                                                                                                                                                        TCCTGCAAGACTTCTGGANACAAATTCACTGAATACACCATGCACTGGGTGAAGCAGAGC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CAGGTGAAACTGCAGCAGTCAGGACCTGAACTGGTGNAGCCTGGGGCTTCAGTGAAGATA
                                                                                                                                                     TATGATTACGACGGACGGTACTTTGACTACTGGGGCCAAGGGACAACGGTCACCGTCTCC
                                                                                                                                                                                                                 ATGCAACTCAGCAGCCTGACATCTGAGGACTCTGCGGGTCTATTACTGTGCCAGTCGGGAC
                                                                                                                                                                                                                                                                             AATGAGAAATTCAAGAGCAAGGCCACACTGACTGTAGACAAATCCTCCAGCACAGCCTAC
                                                                                                                                                                                                                                                                                                          AAGCAGAAGTTCAAGGGCAAGGCCACATTGACTGTAGACAAGTCCTCCAGCACAGCCTAC 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                             CAGGTGAAACTGCAGGAGTCTGGGGGCTGAACTGGTGAAGCCTGGGGCTTCAGTGAAGTTG
                            ACCCAGTCTCCAACAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGT
                                              ACTCAGTCTCCAGCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGT 468
                                                                                                            TCAGGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCGGATCGGACATCGAGCTC 408
                                                                                                                                                                                TACGGTCCCG-----TTTGCTTACTGGGTCCAAGGGACCACGGTCACCGTCTCC 348
                                                                                                                                                                                                                                         ATGGAGCTCCGCAGCCTGACATCTGAGGATTCTGCAGTCTATTACTGTGCAAG-AGATAC
                                                                                         TCAGGTGGCGGTGGCTGGGTGGTGGGTGGCTGGCGGCGGATCTGACATTGAGCTC
                                                                                                                                                                                                                                                                                                                                                                                                   TCCTGCAAGGCTTCCGGCTACACCTTCACCAGCCACTGGATGCACTGGGTGAAGCAGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ĕ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            N-terminal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       17-MAR-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      16-MAR-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          72.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EP 94104160.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EP 94118970.6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 521.6; DB 2;
Pred. No. 7.2e-142;
0; Mismatches 101;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MERCK 1726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        726;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                            480
                                                                                         420
                                                                                                                                                     360
                                                                                                                                                                                                                 300
                                                                                                                                                                                                                                              299
                                                                                                                                                                                                                                                                                                                                                                                                   120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60
                                                                                                                                                                                                                                                                             240
                                                                                                                                                                                                                                                                                                                                        180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                60
```

```
RESULT 11
US-08-463-163-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 2,
Patent No.
                                                                                                                                                                                                                                                                                                                                                             SOFTWARE: Patentin Release #1.0, Ve.
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/463,163
FILLING DATE: 05-JUN-1995
CLASSIFICATION: 536
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 06/227,227
FILING DATE: 22-JAN-1981
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 06/911,227
FILING DATE: 24-SEP-1986
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 06/911,227
FILING DATE: 24-SEP-1986
PRIOR APPLICATION DATA:
                                                                                                                           APPLICATION NUMBER: US 07/341
FILING DATE: 21-APR-1989
PRIOR APPLICATION NUMBER: US 07/865
FILING DATE: 08-APR-1992
ATTORNEY/AGENT INFORMATION:
NAME: Weber, Ellen L.
REGISTRATION NUMBER: 23/762
REFERENCE/DOCKET NUMBER: 0152
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 543-9600
TELEPHONE: (415) 543-9600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
                                             INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS LENGTH: 1797 base pair
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: FitzGerald, David J.
APPLICANT: Chaudhary, Vijay K.
APPLICANT: Pastan, Ira H.
APPLICANT: Waldmann, Thomas A.
APPLICANT: Waldmann, Thomas A.
APPLICANT: Queen, Cary L.
TITLE OF INVENTION: Recombinant Antibody-Toxin Fusion Protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compati
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CORRESPONDENCE ADDRESS:
ADDRESSEE: Townsend and Townsend and Crew STREET: One Market Plaza, Steuart Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NUMBER OF SEQUENCES:
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STREET: One Market L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                589
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                529
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       481 GACAGCTCAAGTGTAAGTTACACGTACTGGTACCAGCAGAAGACAGGATCCTCCCCCCAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               709
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        661 TATTACTGCCAGCAGTGGAGTAGTTACCCGCTCACGTTCGGTGCTGGGACCAAGCTGGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         541 CTCCTGATTTATGACACATCCAACCTGGCTTCTGGAGTCCCTGTTCGCTTCAGTGGCAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            94105-1492
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATAAAA 726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGGTCTGGGACCTCTTACTCTCACAATCAGCCGAATGGAGGCTGAAGATGCTGCCACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TATTACTGCCATCAGCGGAGTAGTTACCCGCTCACGTTCGGTGCTGGGACACAGTTGGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGATGGATTTATGACACATCCAAACTGGCTTCTGGAGTCCCCTGCTCGCTTCAGTGGCAGT 588
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATAAAA 714
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGGTCTGGGACCTCTTATTCTCTCACAATCAGCAGCATGGAGGCTGTAGATGCTGCCACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Application US/08463163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 California
                                                                                                                   (415) 543-5043
                                                                                                                                                                                                                                                                                      US 07/865,722
                                                                                                                                                                                                                                                                                                                                                US 07/341,361
                                                                                                                                                                               015280-12211
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      #
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Tower
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               708
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              648
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            540
```

```
Sequence 7, Application US/08279772A
Patent NO. 6080560
GENERAL INFORMATION:
APPLICANT: Russell, David R
APPLICANT: Fuller, James T
TITLE OF INVENTION: Method for Pr
TITLE OF INVENTION: Cells
NUMBER OF SEQUENCES: 9
CORRESPONDENCE ADDRESS:
ADDRESSEE: Quarles and Brady
STREET: PO Box 2113
                                                                                                                                                                        RESULT 12
US-08-279-772A-7
                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                      뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-08-463-163-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LOCATION: 1..1797
OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME/KEY:
                                                                                                                                                                                                                                                                   661
                                                                                                                                                                                                                                                                                                 601
                                                                                                                                                                                                                                                                                                                              601
                                                                                                                                                                                                                                                                                                                                                            541
                                                                                                                                                                                                                                                                                                                                                                                         541
                                                                                                                                                                                                                                                                                                                                                                                                                         481
                                                                                                                                                                                                                                                                                                                                                                                                                                                      481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 al Similarity
597; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 CAGGTGAAACTGCAGCAGTCAGGACCTGAACTGGTGNAGCCTGGGGCCTTCAGTGAAGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCCTGCAAGACTTCTGGANACAAATTCACTGAATACACCATGCACTGGGTGAAGCAGAGC
                                                                                                                                                                                                                                                        CAGCGGAGTAGTTACCCGCTCACGTTCGGTGCTGGGACACAGTTGGAAATAAA
                                                                                                                                                                                                                                                                                                TCTTACTCTCTCACAATCAGCCGAATGGAGGCTGAAGATGCTGCCACTTATTACTGCCAT
                                                                                                                                                                                                                                                                                                                      TCTTATTCTCTCACAATCAGCAGCATGGAGGCTGTAGATGCTGCCACTTATTACTGCCAT
                                                                                                                                                                                                                                                                                                                                                            ACCACATCCAACCTGGCTTCTGGAGTCCCTGCTCGCTTCAGTGGCAGTGGATCTGGGACC
                                                                                                                                                                                                                                                                                                                                                                                         GACACATCCAAACTGGCTTCTGGAGTCCCTGCTCGCTTCAGTGGCAGTGGGTCTGGGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGGCAGCTCAAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGGGTC---TTTGACTACTGGGGCCAAGGAACCACTCTCACAGTCTCCTCCGGAGGCGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACGGTCCCGTTTGCTTACTGGGTCCAAGGGAACCACGGTCACCGTCTCCTCAGGTGGAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATGGAGCTCCGCAGCCTGACATCTGAGGATTCTGCAGTCTATTACTGTGCAAGAGATACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AATCAGAAGTTCAAGGACAAGGCCACATTGACTGCAGACAAATCCTCCAGCACAGCCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAGCAGAAGTTCAAGGGCAAGGCCACATTGACTGTAGACAAGTCCTCCAGCACAGCCTAC 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CCTGGACAGGGTCTGGAATGGATTGGATATTAATCCTAGCACTGGGTATACTGAATAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCCTGCAAGGCTTCTGGCTACACCTTTACTAGCTACAGGATGCACTGGGTAAAACAGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CAGGTCCAGCTGCAGCAGTCTGGGGGCTGAACTGGCAAAACCTGGGGGCCTCAGTGAAGATG
                                                                                                                                                                                                                                                                                                                                                                                                                         ATAAGTTACATGCACTGGTTCCAGCAGAAGCCAGGCACTTCTCCCAAACTCTGGATTTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATAAGTTACATGCACTGGTACCAGCAGAAGCCTGTCACCTCCCCCAAAAGATGGATTTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATAACCTGCAGTGCCAGCTCAAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGCTCGGGCGGTGGCGGGTGGCGGCGGCTCTCAAATTGTTCTCACCCAGTCTCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATGCAACTGAGCAGCCTGACATTTGAGGACTCTGCAGTCTATTACTGTGCAAGAGGGGGGG
                                                                                                                                                                                                                                        CAMAGGAGTACTTACCCACTCACGTTCGGGTTCTGGGACCAAGCTGGAGCTCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            72.2%;
83.7%;
                                                                                                                                                         US/08279772A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /product= "Anti-Tac(Fv)-PE40"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 517.4; DB 1;
Pred. No. 1.7e-140;
0; Mismatches 113;
                                                                              Producing
                                                                                Antibodies
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length
                                                                                ä
                                                                                Plant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ω.
                                                                                                                                                                                                                                                                   713
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        120
                                                                                                                                                                                                                                                                                                                              660
                                                                                                                                                                                                                                                                                                                                                                                        600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60
                                                                                                                                                                                                                                                                                                 660
                                                                                                                                                                                                                                                                                                                                                            600
                                                                                                                                                                                                                                                                                                                                                                                                                        540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; NAME/KEY:
; LOCATION:
US-08-279-772A-7
                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                 몽
                                                        δ
                                                                                            밁
                                                                                                                    δ
                                                                                                                                                                                 δ
                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                            문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                         문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CITY: Mau...
STATE: WI
STATE: Winted States of COUNTRY: United States of COUNTRY: United States of COUNTRY: STATE FORM:
MEDIUM TYPE: Floppy dis
TOWNUTER: IBM PC COMPA!
TOWNUTER: TYPE: FLOPPY dis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: US/08/279.
FILING DATE:
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: Seay, Nicholas J.
REGISTRATION NUMBER: 27,386
REFERENCE/DOCKET NUMBER: 11-2:
TELECOMMUNICATION INFORMATION:
TELEPHONE: 608-251-5000
TELEPAX: 608-251-9166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELEFAX: 608-251-9166
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER: IBM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0,
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TOPOLOGY: li
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STRANDEDNESS: dou
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LENGTH:
                                                                                                                                                                                        361
                                                                                                                                                                                                                                                                                247
                                                            481
                                                                                                                           421
                                                                                                                                                         364
                                                                                                                                                                                                                      307
                                                                                                                                                                                                                                                    301
                                                                                                                                                                                                                                                                                                              241
                                                                                                                                                                                                                                                                                                                                            187
                                                                                                                                                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                                                                                                                                         127
                                                                                                                                                                                                                                                                                                                                                                                                                                      121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           596;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 CAGGTGAAACTGCAGCAGTCAGGACCTGAACTGGTGNAGCCTGGGGGCTTCAGTGAAGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           h 71.9%;
Similarity 83.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              H: 719 base pairs nucleic acid
                                                                                                                                                                                                                                        ACGGTCCCGTTTGCTTACTGGGTCCAAGGGACCACGGTCACCGTCTCCTCAGGTGGAGGC
   GACACATCCAAACTGGCTTCTGGAGTCCCTGCTCGCTTCAGTGGCAGTGGGTCTGGGACC
                                                                 ATAAGTTACATGCACTGGTACCAGCAGAAGCCTGTCACCTCCCCCAAAAGATGGATTTAT
                                                                                                                GCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGGCAGCTCAAGT
                                                                                                                                                           GGCTCGGGCGGTGGCGGCTCGGGTGGCGGCGCTCTCAAATTGTTCTCACCCAGTCTCCA
                                                                                                                                                                              GGGGTC---TTTGACTACTGGGGCCAAGGAACCACTCTCACAGTCTCCTCCGGAGGCGGT
                                                                                                                                                                                                                                                                                 ATGCAACTGAGCAGCCTGACATTTGAGGACTCTGCAGTCTATTACTGTGCAAGAGGGGGGG
                                                                                                                                                                                                                                                                                                   ATGGAGCTCCGCAGCCTGACATCTGAGGATTCTGCAGTCTATTACTGTGCAAGAGATACT
                                                                                                                                                                                                                                                                                                                                              AATCAGAAGTTCAAGGACAAGGCCACATTGACTGCAGACAAATCCTCCAGCACAGCCTAC
                                                                                                                                                                                                                                                                                                                                                              AAGCAGAAGTTCAAGGGCAAGGCCACATTGACTGTAGACAAGTCCTCCAGCACAGCCTAC
                                                                                                                                                                                                                                                                                                                                                                                                         CCTGGACAGGGTCTGGAATGGATATGGATATTAATCCTAGCACTGGGTATACTGAATAC
                                                                                                                                                                                                                                                                                                                                                                                                                            TCCTGCAAGGCTTCTGGCTACACCTTTACTAGCTACAGGATGCACTGGGTAAAACAGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CAGGTCCAGCTTCAGCAGTCTGGGGCTGAACTGGCAAAACCTGGGGCCTCAGTGAAGATG
                                   ATAAGTTACATGCACTGGTTCCAGCAGAAGCCAGGCACTTCTCCCCAAACTCTGGATTTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US/08/279,772A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              7:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           of America
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           11-229-9097-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 515.8; DB 3;
Pred. No. 3.5e-140;
0; Mismatches 114;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   #1.25
```

Indels Length

ω •

Gaps

180

186

240

120 66 60

126

540

483 480

600 543 420 363 360 306

```
S
                                                          á
                                                                                             밁
                                                                                                                         δ
                              문
                                                                                                                                                                                                                        US-08-902-486-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 13
US-08-902-486-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  B
                                                                                                                                                           Query Match
Best Local Similarity
Matches 596; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 10, Application US/08902486
Patent No. 6140075
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STATE: WI
COUNTRY: US
ZIP: 53/01-2113
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                    TELEFAX: 608-251-9166
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE CHARACTERISTICS:
LENGTH: 720 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
                                                                                                                                                                                                                                                                                                                      FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATTORNEY/AGENT INFORMATION:
NAME: S649, Nicholas J.
REGISTRATION UMBER: 27386
REFERENCE/DOCKET NUMBER: 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS: Quarles 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Russel, David R.
APPLICANT: Fuller, James T.
TITLE OF INVENTION: METHOD FOR PRODUCING ANTIBODIES AND
TITLE OF INVENTION: PROTEIN TOXINS IN PLANT CELLS
                                                                                                                                                                                                                                                                                                                                   MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEPHONE: 608-251-5000
                                                                                                                                                                                                                                                                                      NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                      NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                       TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STREET:
                                                                                                                                                                                                                                           LOCATION:
 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  544
                                 67
                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3
CAGGTGAAACTGCAGCAGTCAGGACCTGAACTGGTGNAGCCTGGGGGCTTTCAGTGAAGATA
                                                   TCCTGCAAGACTTCTGGANACAAATTCACTGAATACACCATGCACTGGGTGAAGCAGAGC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CAGGTCCAGCTTCAGCAGTCTGGGGGCTGAACTGGCAAAACCTGGGGCCTCAGTGAAGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CAAAGGAGTACTTACCCACTCACGTTCGGGTTCTGGGACCAAGCTGGAGCTCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CAGCGGAGTAGTTACCCGCTCACGTTCGGTGCTGGGACACAGTTGGAAATAAA 713
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCTTACTCTCACAATCAGCCGAATGGAGGCTGAAGATGCTGCCACTTATTACTGCCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TCTTATTCTCTCACAATCAGCAGCATGGAGGCTGTAGATGCTGCCACTTATTACTGCCAT 660
                              TCCTGCAAGGCTTCTGGCTACACCTTTACTAGCTACAGGATGCACTGGGTAAAACAGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 South Pinckney Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           dison
                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                      CDS
                                                                                                                                                                                                                                                                                    1..719
                                                                                                                                                                                                                                                                                                       Sg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Quarles & Brady
                                                                                                                                                                                                                                                                                                                                      DNA (genomic)
                                                                                                                                                                        71.9%;
83.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US/08/902,486
                                                                                                                                                                                                                                                                                                                                                                                                                                     10:
                                                                                                                                                           0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   670513.90261
                                                                                                                                                         Score 515.8; DB 3;
Pred. No. 3.5e-140;
D; Mismatches 114;
                                                                                                                                                                                         DB 3;
                                                                                                                                                           114;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                #1.30
                                                                                                                                                           Indels
                                                                                                                                                                                         Length
                                                                                                                                                           <u>υ</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   663
                              126
                                                                                             66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 14
US-08-553-497A-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                 Patent No. 5844093
GENERAL INFORMATION:
APPLICANT: KETTLES
APPLICANT: BENDIG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 27,
                                                                                                                                                                                                                                                                                                                                   APPLICANT:
APPLICANT:
APPLICANT:
             MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, V
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/553,497A
FILING DATE: 17-NOV-1995
                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                     TITLE OF INVENTION:
TITLE OF INVENTION:
NUMBER OF SEQUENCES:
                                                                                                         COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                      CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                        STREET: 2200 CLA
CITY: ARLINGTON
STATE: VA
COUNTRY: US
ZIP: 22201
 CLASSIFICATION:
                                                                                                                                                                                                                        ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            541 GACACATCCAAACTGGCTTCTGGAGTCCCTGCTCGCTTCAGTGGCAGTGGGTCTGGGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATAAGTTACATGCACTGGTACCAGCAGAAGCCTGTCACCTCCCCCAAAAGATGGATTTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGGCAGCTCAAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATAACCTGCAGTGCCAGCTCAAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGCTCGGGCGGTGGCGGCTCGGGTGGCGGCGCTCTCAAATTGTTCTCACCCAGTCTCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGGGTC---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACGGTCCCGTTTGCTTACTGGGTCCAAGGGAACCACGGTCACCGTCTCCTCAGGTGGAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATGGAGCTCCGCAGCCTGACATCTGAGGATTCTGCAGTCTATTACTGTGCAAGAGATACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAGCAGAAGTTCAAGGGCAAGGCCACATTGACTGTAGACAAGTCCTCCAGCACAGCCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CAGCGGAGTAGTTACCCGCTCACGTTCGGTGCTGGGACACAGTTGGAAATAAA 713
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TCTTACTCTCACAATCAGCCGAATGGAGGCTGAAGATGCTGCCACTTATTACTGCCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TCTTATTCTCTCACAATCAGCAGCATGGAGGCTGTAGATGCTGCCACTTATTACTGCCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATAAGTTACATGCACTGGTTCCAGCAGAAGCCAGGCACTTCTCCCAAACTCTGGATTTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATGCAACTGAGCAGCCTGACATTTGAGGACTCTGCAGTCTATTACTGCTGCAAGAGGGGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AATCAGAAGTTCAAGGACAAGGCCACATTGACTGCAGACAAATCCTCCAGCACAGCCTAC
                                                                                                                                                                                                                                                                                                  MITJANS, FRANSESC
ROSELL, ELISABET
BLASCO, FRANCESC
PIULATS, JAUME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Application US/08553497A
                                                                                                                                                                                                        E: MILLEN, WHITE, ZEI 2200 CLARENDON BLVD.
                                                                                                                                                                                                                                                                                                                                                                                  KETTLEBOROUGH, C. BENDIG, MARY M. ANSELL, KEITH H. GUSSOW, DETLEF
                                                                                                                                                                                                                                                                                                                                                                   JAUME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -TTTGACTACTGGGGCCAAGGAACCACTCTCACAGTCTCCTCCGGAGGCGGT
                                                                                                                                                                                                                                                                     ANTI-EGFR SINGLE-CHAIN FVS ANTIBODIES
                                                                                                                                                                                                                                                                                                                                                                                                                                  ი
                                                                                                                                                                                                        ZELANO & BRANIGAN,
VD. SUITE 1400
                                                               Version
                                                               #
                                                                                                                                                                                                                                                                                      AND ANTI-EGFR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 240
```

663 660 603 600 543

```
밁
                                                                                           ঠ
                                                                                                                             밁
                                                                                                                                                                                             밁
                                                                                                                                                                                                                        á
                                                                                                                                                                                                                                                                                       ş
                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
밁
                           S
                                                                                                                                                        δ
                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-08-553-497A-27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches 607;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MOLECULE TYPE: c
HYPOTHETICAL: NO
ANTI-SENSE: NO
FRAGMENT TYPE: N
ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEFAX: 703-243-6410
NFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE CHARACTERISTICS:
LENGTH: 726 base pairs
TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                IMMEDIATE SOURCE:
LIBRARY: 7 G 1 (single-chain Fv, heavy, light chain, LIBRARY: linker)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION DATA:
APPLICATION NUMBER: EP 9.
FILING DATE: 02-DEC-1994
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION DATA:
APPLICATION NUMBER: EP 9/
FILING DATE: 17-MAR-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELECOMMUNICATION INFORMATION: TELEPHONE: 703-243-6333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME/KEY: CDS
LOCATION: 1..726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM: mouse
STRAIN: Balb/c
TISSUE TYPE: spl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME: HAMLET-KING, DIANA
REGISTRATION NUMBER: 33,302
REFERENCE/DOCKET NUMBER: MERCK 1726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: FILING DATE: 16-MAP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TOPOLOGY:
                                                                                                                                                                                             242
                            410
                                                            362
                                                                                                                              302
                                                                                                                                                                                                                                                             182
                                                                                             350
                                                                                                                                                             301
                                                                                                                                                                                                                             242
                                                                                                                                                                                                                                                                                            182
                                                                                                                                                                                                                                                                                                                             122
422
                                                                                                                                                                                                                                                                                                                                                         62
                                                                                                                                                                                                                                                                                                                                                                                                                         62
                                                                                                                                                                                                                                                                                                                                                                                                                                                         N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         N
                                                                                                                                                                                                                                                                                                                            CCTGCAAGACTTCTGGANACAAATTCACTGAATACACCATGCACTGGGTGAAGCAGAGCC 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGGTGAAACTGCAGCAGTCAGGACCTGAACTGGTGNAGCCTGGGGCTTCAGTGAAGATAT
                                                              CAGGTGGCGGTGGCTGGTGGTGGGTGGCGGCGGATCTGACATTGAGCTCA
                                                                                  CAGGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCCGGTGGCGGATCGGACATCGAGCTCA 409
                                                                                                                             ATGATTACGACGGACGGTACTTTGACTACTGGGGCCAAGGGACCACGGTCACCGTCTCCT
                                                                                                                                                                                             TCGAACTCAGCAGCCTGACATCTGAGGACTGCTCGGTCTATTACTGTGCCAGTCGGGACT
                                                                                                                                                                                                                           TGGAGCTCCGCAGCCTGACATCTGAGGATTCTGCAGTCTATTACTGTGCAAG-AGATACT 300
                                                                                                                                                                                                                                                             ATGAGAAATTCAAGAGCAAGGCCACACTGACTGTAGACAAATCCTCCAGCACAGCCTACA
                                                                                                                                                                                                                                                                                             AGCAGAAGTTCAAGGGCAAGGCCACATTGACTGTAGACAAGTCCTCCAGCACAGCCTACA 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGGTCAAGCTGCAGCAGTCAGGGGCTGAACTGGTGAAGCCTGGGGGCTTCAGTGAAGTTGT
CCCAGTCTCCAACAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTG
                    CTCAGTCTCCAGCAATCATGTCTGCATCTCCAGGGGAAAGGTCACCATGACCTGCAGTG
                                                                                                                                                             ACGGTCCCG-----
                                                                                                                                                                                                                                                                                                                                                                                            CCTGCAAGGCTTCCGGCTACACCTTCACCAGCCACTTGGATCACTGGGTGAAGCAGAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   703-243-6410
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ĕ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    N-terminal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    splenocytes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              UMBER: WO PCT/EP95/00978
16-MAR-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       71.5%;
83.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EP 94118970.6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EP 94104160.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 512.6; DB 2;
Pred. No. 3e-139;
                                                                                                                                                           TTTGCTTACTGGGTCCAAGGGACCACGGTCACCGTCTCCT 349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches 106;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                              469
                                                              421
                                                                                                                                                                                             301
                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                            121
                                                                                                                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                             361
                                                                                                                                                                                                                                                             241
```

```
RESULT 15
US-08-652-507-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                 ঠ
                                                 밁
                                                                              S
                                                                                                                                                                                  US-08-652-507-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 1, Application US/08652507 Patent No. 5876691 GENERAL INFORMATION:
                                                                                                                   Matches
                                                                                                                                  Best Local
                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: US/08/652,507
FILING DATE: 02-Jul-1996
CLASSIFICATION: 530
ATTORNEY/AGENT INFORMATION:
NAME: Arthur R. Crawford
REGISTRATION NUMBER: 25,327
REFERENCE/DOCKET NUMBER: 117-211
TELECOMMUNICATION INFORMATION:
TELEPHONE: 703-816-4000
                                                                                                                                                                                                                                                                                                 TELEFAX: 703-816-4100 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                 SEQUENCE CHARACTERISTICS:
LENGTH: 810 base pairs
TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0,
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ZIP: 22201-4714
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE OF INVENTION:
                                                                                                                                                                                                 TOPOLOGY: 1
MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CORRESPONDENCE ADDRESS:
ADDRESSEE: Nixon & V
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                  TELEPHONE: 703-C-
TOTOPAX: 703-816-4100
                                                                                                                                                                                                                 STRANDEDNESS: double TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CITY: Arlington
STATE: Virginia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             590
                                                                                                                 597;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             722 TAAAA 726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           710 TAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            650
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            602 GGTCTGGGACCTCTTACTCTCACAATCAGCCGAATGGAGGCTGAAGATGCTGCCACTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          542 TTCTGATTTATGACACATCCAACCTGGCTTCTGGAGTCCCTGTTCGCTTCAGTGGCAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          530 GATGGATTTATGACACATCCAAACTGGCTTCTGGAGTCCCTGCTCGCTTCAGTGGCAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          482 ACAGCTCAAGTGTAAGTTACATGTACTGGTACCAGCAGAAGACAGGATCCTCCCCCAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61 TCCTGCAAGACTTCTGGANACAAATTCACTGAATACACCATGCACTGGGTGAAGCAGAGC 120
                                                   79
                                                                    1 CAGGTGAAACTGCAGCAGTCAGGACCTGAACTGGTGNAGCCTGGGGGCTTCAGTGAAGATA 60
                                                                                                                                 Similarity
                                                                                                                                                                                                                                          : 810 base pairs
                                                   CAGGTGAAACTGCAGCAGTCTGGGGCAGAACTTGTGAGGTCAGGGACCTCAGTCAAGTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATTACTGCCAGCAGTGGAGTAGTTACCCGCTCACGTTCGGTGCTGGGACCAAGCTGGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATTACTGCCATCAGCGGAGTAGTTACCCGCTCACGTTCGGTGCTGGGACACAGTTGGAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGTCTGGGACCTCTTATTCTCTCACAATCAGCAGCATGGAGGCTGTAGATGCTGCCACTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1100 No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                USA
                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             714
                                                                                                                                                                                                 DNA (genomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                & Vanderhye, P.C.
5876691th Glebe Road, 8th Floor
                                                                                                                                 70.7%;
82.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ANTIBODY AGAINST CARCINOEMBRYONIC ANTIGEN
                                                                                                                                                                                                                                                                                                  ::
                                                                                                                Score 507.2; DB 2;
Pred. No. 1.2e-137;
0; Mismatches 120;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Version #1.30 (EPO)
                                                                                                                   Indels
                                                                                                                                                Length
                                                                                                                                                   810;
                                                                                                                   9;
                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             649
                                                    138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              709
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            529
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               721
```

8 8 8 8 8

,								
652 TACTGCCATCAGCGGA              739 TACTGCCAGCAAAGGA 712 AAACGG 717        799 AAACGG 804	532 TGGATTTATGACACAT		439 ddrddadddddrrcad 412 cadrorcoagoaaroa 	301ACGGTCC	241 ATGGAGCTCCGCAGCC	181 AAGCAGAAGTTCAAGG	121 CATGGAAAGAGCCTTG	139 TCCTGCACAGCTTCTG
TACTGCCATCAGCGAGTAGTTACCCGCTCACGTTCGGTGCTGGGACACAGTTGGAAATA	TGGATTTATGACACATCCAAACTGGCTTCTGGAGTCCCTGCTTCAGTGGCAGTGGG	ACTICAAGTATAAGTTACATGCACTGGTACCAGCAGAAGCCTGTCACCTCCCCCAAAAGA	dergangschertengschafter der Crescharangschaften der Schreiber der Gerenbergeren der	ACGGTCCCGTTTGCTTACTGGGTCCAAGGGACCACGGTCACCGTCTCCTCA	ATGGAGCTCCGCAGCCTGACATCTGAGGACTCTGCAGTCTATTACTGTGAAGAGATACT	AAGCAGAAGTTCAAGGGCAAGGCCACATTGACTGTAGACAAGTCCTCCAGCACAGCCTAC	CATGGAAAGAGCCTTGAGTGGATTGGAGGTATTAATCCTAACAATGGTGGTACTAACTA	. TCCTGCACAGCTTCTGGCTTCAACATTAAAGACTCCTATATGCACTGGTTGAGGCAGGG
			TCAGAAAATGTGCTCACC 4 ACCATGACCTGCAGTGGC 4 ACCATGACCTGCAGTGGC 5 ACCATAACCTGCAGTGCC 5	ACGGTCACCGTCTCCTCA 3				
711 798	591 678 651 738	531 618 <sub>.</sub>	498 471 558	351 438 411	300 378	240 318	180 258	198

8 8 8 8 8 8

Search completed: February 18, 2005, 23:56:46 Job time : 150.31 secs

망

8 8 8 8

음 성

<b>S</b>			
	-		
			•

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

11	ဖစ	76	ω 1	<b>.</b> ω	2	ב י	Result No.	
561.4 553.2	574 574	593.4	593.4	715	715	715	Score	
78.3 77.2	80.1 80.1	82.8 82.8	82.8	99.7	99.7	99.7	Query Match	æ
786 726	726 726	717 717	717	1176	717	717	Query Match Length	
18	18	17	14	15	15	80	DB	
US-10-689-006-23 US-10-259-087A-17	US-10-259-087A-19 US-10-689-006-19	US-10-384-788-5 US-10-618-856-5	US-10-162-889-5	5 US-10-075-947A-3	US-10-075-947A-1	US-08-940-544-3	ID	SUMMARIES
Sequence 23, Appl Sequence 17, Appl	Sequence 19, Appl Sequence 19, Appl	Sequence 5, Appli Sequence 5, Appli	Sequence 5, Appli	Sequence 3, Appli	Sequence 1, Appli	Sequence 3, Appli	Description	

45	44	43	42	41	40	39	38	37	36	35	34	ω u	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	,
449.2	463	•	73.	•	498	•	•	•			501.2		•		•	•	502.8	•		•	•	502.8	504	505.4	0	•	•	•	•	534.2	•	٠	•
62.6	64.6	65.0	66.1	68.8	69.5	69.7	69.9	69.9	69.9	69.9	69.9	69.9	69.9	69.9	70.1	70.1	70.1	70.1	70.1	70.1	70.1	70.1		70.5			•			74.5			
765	1062	1062	795	1974	1545	1479	1574	1479	1479	1479	1479	1479	1479	1241	1479	1479	1479	1479	1479	1479	1479	1479	1673	738	723	738	714	714	720	780	771	807	
14	15	15	14	18	10	18	16	18	18	18	18	18	18	17	18	18	18	18	18	18	18	18	10	18	17	18	9	10	9	14	<u>1</u> 4	16	
-10-013-1	-10-295-757-	-10-295-	-10-114-	-10-723-003-	-09-948-004-1	-10-682-845-	-10-168-809-2	-10-682-8	-10-682-845-	-10-682-845-6	US-10-682-845-66	US-10-682-845-62	-10-682-84	-10-362-591-	-10-682-84	-10-682-845-8	-10-682-845-8	-10-682-845-7	-10-682-845-7	-10-682-845-7	-10-682	-845-	-09-819-266-2	-10-861-617	062-188-	US-10-861-617-14	US-09-976-787-31	US-09-798-689-22	US-09-976-787-30	247-488-	-10-247-488-	US-10-408-930-4	
	Sequence			Sequence			Ф	O	O	æ	æ		Sequence							O		Sequence				æ	w	æ	u		æ	æ	
44,	7,	6,		47,	17,	76,	21,	,88	,08	, 89	, 99	62,					82,	78,	74,	72,	70,	64,	27,	ō	4.	4	ŗ	22,	ō L	•	•	4	
App	Appli	Appli	Appl	Appl	Appl	App]	Appl	Appl	Appl	Appl	Appl	Appl	Appl	Appli	App	Appl	App1	Appl	App1	App	App	App	App	App]	Appli	App	App1	App.	App1	App1	Appl:	Appl:	

## ALIGNMENTS

```
Sequence 1, Application US/10075947A
Publication No. US20030147808A1
GENERAL INFORMATION:
APPLICANT: Cheung, Nai-Kong V.
APPLICANT: Larson, Steven M.
APPLICANT: Larson, Steven M.
APPLICANT: Sadelain, Michel
TITLE OF INVENTION: Single Chain FV Constru
TITLE OF INVENTION: Antibodies
FILE REFERENCE: MSK:P-013-2
CURRENT FILING DATE: 2002-02-13
PRIOR APPLICATION NUMBER: US/10/075,947A
CURRENT FILING DATE: 1998-09-18
PRIOR APPLICATION NUMBER: 09/142,974
PRIOR FILING DATE: 1998-09-18
PRIOR APPLICATION NUMBER: PCT/US97/04427
PRIOR FILING DATE: 1998-03-20
PRIOR APPLICATION NUMBER: 60/013,703
PRIOR APPLICATION NUMBER: 60/013,703
PRIOR APPLICATION NUMBER: 60/013,703
                                                                                                                                                                                                                                                                 RESULT 2
US-10-075-947A-1
                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          당
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             뭐
                                                                                                                                                                                                                                                                                                                                                 661
                                                                                                                                                                                                                                                                                                                                                                            601
                                                                                                                                                                                                                                                                                                                                                                                                     601
                                                                                                                                                                                                                                                                                                                                                                                                                                541
                                                                                                                                                                                                                                                                                                                                                                                                                                                          541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              361
                                                                                                                                                                                                                                                                                                                        661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CAGGTGAAACTGCAGCAGTCAGGACCTGAACTGGTGNAGCCTGGGGCTTCAGTGAAGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                GACACATCCAAACTGGCTTCTGGAGTCCCTGCTCCGCTTCAGTGGCAGTGGGTCTGGGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAGCAGAAGTTCAAGGGCAAGGCCACATTGACTGTAGACAAGTCCTCCAGCACAGCCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCCTGCAAGACTTCTGGANACAAATTCACTGAATACACCATGCACTGGGTGAAGCAGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCCTGCAAGACTTCTGGANACAAATTCACTGAATACACCATGCACTGGGTGAAGAGAGC
                                                                                                                                                                                                                                                                                                                                    CAGCGGAGTAGTTACCCGCTCACGTTCGGTGCTGGGACACAGTTGGAAATAAAACGG 717
                                                                                                                                                                                                                                                                                                                                                                                        TCTTATTCTCTCACAATCAGCAGCATGGAGGCTGTAGATGCTGCCACTTATTACTGCCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                GACACATCCAAACTGGCTTCTGGAGTCCCTGCTCGCTTCAGTGGCAGTGGGTCTGGGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATAAGTTACATGCACTGGTACCAGCAGAAGCCTGTCACCTCCCCCAAAAGATGGATTTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATĀAGTTACATGCACTGGTACCAGCAGAAGCCTGTCACCTCCCCCAAAAGATGGATTTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCAATCATGTCTGCATCTCCAGGGGAGAAAGGTCACCATGACCTGCAGTGGCAGCTCAAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACGGTCCCGTTTGCTTACTGGGTCCAAGGGACCACGGTCACCGTCTCCTCAGGTGGAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATGGAGCTCCGCAGCCTGACATCTGAGGATTCTGCAGTCTATTACTGTGCAAGAGATACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACGGTCCCGTTTGCTTACTGGGTCCAAGGGACCACGGTCACCGTCTCCTCAGGTGGAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATGGAGCTCCGCAGCCTGACATCTGAGGATTCTGCAGTCTATTACTGTGCAAGAGATACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAGCAGAAGTTCAAGGGCAAGGCCACATTGACTGTAGACAAGTCCTCCAGCACAGCCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                         FV Constructs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                        of Anti-Ganglioside
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                o
,;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                         GD2
                                                                                                                                                                                                                                                                                                                                                                                                                                600
                                                                                                                                                                                                                                                                                                                                                                                                                                                          600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
```

```
δ
                              밁
                                                S
                                                                           片
                                                                                          5
                                                                                                                      뭐
                                                                                                                                          Ş
                                                                                                                                                                    밁
                                                                                                                                                                                  Ş
                                                                                                                                                                                                               밁
                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                          맑
                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-10-075-947A-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
Matches 717; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOFTWARE: PatentIn
SEQ ID NO 1
LENGTH: 717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: DNA
ORGANISM: Murine
FEATURE:
OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURE:
NAME/KEY: unsure
LOCATION: (37)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURE:
NAME/KEY: unsure
LOCATION: (79)
                                                                                                                                                                                                                                                                                 301
                                                                            541
                                                                                                  541
                                                                                                                        481
                                                                                                                                                                    421
                                                                                                                                                                                          421
                                                                                                                                                                                                                361
                                                                                                                                                                                                                                                          301
                                                                                                                                                                                                                                                                                                        241
                                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                                                               121
                                                                                                                                             481
                                                                                                                                                                                                                                    361
                                                                                                                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                                                                                                                                                                    61 TCCTGCAAGACTTCTGGANACAAATTCACTGAATACACCATGCACTGGGTGAAGCAGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 CAGGTGAAACTGCAGCAGTCAGGACCTGAACTGGTGNAGCCTGGGGCTTCAGTGAAGATA
                                                                                                                                                                                                                                                                                                                                                                                                          ATAAGTTACATGCACTGGTACCAGCAGAAGCCTGTCACCTCCCCCCAAAAGATGGATTTAT
                                                                                                                                                                                    GCAATCATGTCTGCATCTCCAGGGGGAGAAGGTCACCATGACCTGCAGTGGCAGTGGCAGCTCAAGT
                                                                                                                                                                                                                          ACGGTCCCGTTTGCTTACTGGGTCCAAGGGACCACGGTCACCGTCTCCTCAGGTGGAGGC
CAGCGGAGTAGTTACCCGCTCACGTTCGGTGCTGGGACACAGTTGGAAATAAAACGG
                                                                                          GACACATCCAAACTGGCTTCTGGAGTCCCTGCTCGCTTCAGTGGCAGTGGGTCTTGGGACC
                                                                                                                                                                                                                                                                                                                                                    AAGCAGAAGTTCAAGGGCAAAGGCCACATTGACTGTAGACAAGTCCTCCAGCACAGCCTAC
                                                                                                                                                                                                                                                                                                                                                                                              GACACATCCAAACTGGCTTCTGGAGTCCCTGCTCGCTTCAGTGGCAGTGGGTCTGGGACC
                                                                                                                                                                    GCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGGCAGCTCAAGT
                                                                                                                                                                                                                                                           ACGGTCCCGTTTGCTTACTGGGTCCAAGGGACCACGGTCACCGTCTCCTCAGGTGGAGGC
                                                                                                                                                                                                                                                                                                       ATGGAGCTCCGCAGCCTGACATCTGAGGATTCTGCAGTCTATTACTGTGCAAGAGATACT
                                                                                                                                                                                                                                                                                                                    ATGGAGCTCCGCAGCCTGACATCTGAGGATTCTGCAGTCTATTACTGTGCAAGAGATACT
                                                                                                                                                                                                                                                                                                                                                                 AAGCAGAAGTTCAAGGGCAAGGCCACATTGACTGTAGACAAGTCCTCCAGCACAGCCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CAGGTGAAACTGCAGCAGTCAGGACCTGAACTGGTGNAGCCTGGGGCTTCAGTGAAGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             99.7%; Score 715; DB 15; 100.0%; Pred. No. 5.9e-228;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                            600
                                660
                                                       660
                                                                                                  600
                                                                                                                         540
                                                                                                                                               540
                                                                                                                                                                    480
                                                                                                                                                                                                                                                                                                                               300
                                                                                                                                                                                                                                                                                                                                                                                                                     180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60
                                                                                                                                                                                          480
                                                                                                                                                                                                                420
                                                                                                                                                                                                                                     420
                                                                                                                                                                                                                                                           360
                                                                                                                                                                                                                                                                                 360
                                                                                                                                                                                                                                                                                                        300
                                                                                                                                                                                                                                                                                                                                                    240
                                                                                                                                                                                                                                                                                                                                                                         240
                                                                                                                                                                                                                                                                                                                                                                                               180
                                                                                                                                                                                                                                                                                                                                                                                                                                           120
```

RESULT 3 US-10-075-947A-3

Sequence 3, Application US/10075947A Publication No. US20030147808A1 GENERAL INFORMATION:

Ċ

```
밁
                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; NAME/KEY: unsure
; LOCATION: (79)
US-10-075-947A-3
S
                              밁
                                                         S
                                                                                            밁
                                                                                                                  5
                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                               片
                                                                                                                                                                                                                                                                                                                                                                          5
                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                         8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
Matches 717; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER OF SEQ ID NOS: 5
SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 3
LENGTH: 1176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Sadelain, Michel
TITLE OF INVENTION: Single Chain FV Constructs of Anti-Ganglioside GD2
TITLE OF INVENTION: Antibodies
FILE REFERENCE: MSK. P-013-2
CURRENT APPLICATION NUMBER: US/10/075,947A
CURRENT FILING DATE: 2002-02-13
PRIOR APPLICATION NUMBER: 09/142,974
PRIOR FILING DATE: 1998-09-18
PRIOR FILING DATE: 1998-09-18
PRIOR APPLICATION NUMBER: PCT/US97/04427
PRIOR FILING DATE: 1998-03-20
PRIOR PILING DATE: 1996-03-20
PRIOR FILING DATE: 1996-03-20
PRIOR FILING DATE: 1996-03-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME/KEY: unsure
LOCATION: (37)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORGANISM: Murine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: DNA
 541
                                                                                                                                                          361
                                                                                                                                                                                                                        301
                                481
                                                             481
                                                                                            421
                                                                                                                          421
                                                                                                                                                                                        361
                                                                                                                                                                                                                                                    301
                                                                                                                                                                                                                                                                                     241
                                                                                                                                                                                                                                                                                                                  241
                                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                                                181
                                                                                                                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          μ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CAGGTGAAACTGCAGCAGTCAGGACCTGAACTGGTGNAGCCTGGGGCTTCAGTGAAGATA
                                                                                                                     GCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGGCAGCTCAAGT
                                                                                                                                                                                         ATGGAGCTCCGCAGCCTGACATCTGAGGATTCTGCAGTCTATTACTGTGCAAGAGATACT
                                                                                                                                                                                                                                                                                                                                                                     AAGCAGAAGTTCAAGGGCAAGGCCACATTGACTGTAGACAAGTCCTCCAGGCACAGCCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                               TCCTGCAAGACTTCTGGANACAAATTCACTGAATACACCATGCACTGGGTGAAGCAGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCCTGCAAGACTTCTGGANACAAATTCACTGAATACACCATGCACTGGGTGAAGCAGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CAGGTGAAACTGCAGCAGTCAGGACCTGAACTGGTGNAGCCTGGGGGCTTCAGTGAAGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Cheung, Nai-Kong V
Larson, Steven M.
 GACACATCCAAACTGGCTTCTGGAGTCCCTGCTCGCTTCAGTGGCAGTGGGTCTGGGACC
                                                     ATAAGTTACATGCACTGGTACCAGCAGAAGCCTGTCACCTCCCCCAAAAGATGGATTTAT
                                                                                                                                                                                                                                         ACGGTCCCGTTTGCTTACTGGGTCCAAGGGAACCACGGTCACCGTCTCCTCAGGTGGAGGC
                                                                                                                                                                                                                                                                                                                                                                                                               ATAAGTTACATGCACTGGTACCAGCAGAAGCCTGTCACCTCCCCCAAAAGATGGATTTAT
                                                                                            GCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGGCAGCTCAAGT
                                                                                                                                                                                                                       ACGGTCCCGTTTGCTTACTGGGTCCAAGGGACCACGGTCACCGTCTCCTCAGGTGGAGGC
                                                                                                                                                                                                                                                                                   ATGGAGCTCCGCAGCCTGACATCTGAGGATTCTGCAGTCTATTACTGTGCAAGAGATACT
                                                                                                                                                                                                                                                                                                                                                   AAGCAGAAGTTCAAGGGCAAGGCCACATTGACTGTAGACAAGTCCTCCAGCACAGCCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Guo, Hong-Fen
Rivlin, Ken
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5F11-scFv-streptavidin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               99.7%; 500
100.0%; Pr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 715; DB 15; 1; Pred. No. 7.3e-228; 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 1176;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ٥,
                                540
                                                             540
                                                                                            480
                                                                                                                           480
                                                                                                                                                          420
                                                                                                                                                                                                                        360
                                                                                                                                                                                                                                                    360
                                                                                                                                                                                                                                                                                                                    300
                                                                                                                                                                                                                                                                                                                                                                                240
                                                                                                                                                                                                                                                                                                                                                                                                               180
                                                                                                                                                                                                                                                                                                                                                                                                                                              180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60
                                                                                                                                                                                                                                                                                     300
                                                                                                                                                                                                                                                                                                                                                   240
```

```
; SEQ ID NO 5 ;
; LENGTH: 717
; TYPE: DNA
; TYPE: DNA
; ORGANISM: Homo sapiens
; FBATURE:
; NAME/KEY: CDS
; LOCATION: (1)...(717)
US-09-808-037-5
                            δ
                                                                                                S
                                                                                                                                            B
                                                                                                                                                                              Ś
                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                á
                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 4
US-09-808-037-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 5, Application US/09808037 Patent No. US20020052311A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match 82.8%;
Best Local Similarity 90.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR THE TREATMENT AND/OR DIAGNOSIS:
TITLE OF INVENTION: MEUROLOGICAL DISEASES AND DISORDERS
FILE REFERENCE: SOLOMON-2D
CURRENT APPLICATION NUMBER: US/09/808,037
CURRENT FILING DATE: 2001-03-15
PRIOR APPLICATION NUMBER: 09/629,971
PRIOR PILING DATE: 2000-07-31
PRIOR FILING DATE: 2000-07-31
PRIOR FILING DATE: 2000-07-31
PRIOR FILING DATE: 1999-12-29
PRIOR FILING DATE: 1999-12-29
PRIOR APPLICATION NUMBER: US 60/152,417
PRIOR PILING DATE: 1999-09-03
NUMBER OF SEQ ID NOS: 33
SOFTWARE: Patentin version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: SOLOMON, Beka APPLICANT: HANAN, Eilat
                                    358
                                                                                                                                                                                                                                                                                            121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           541 GACACATCCAAACTGGCTTCTGGAGTCCCTGCTCACTGAGTGGCAGTGGGTCTGGGACC
361
                                                                      301
                                                                                                                                              241
                                                                                                                                                                                  241
                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                      181
                                                                                                                                                                                                                                                                                                                                121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         601
                                                                                                                                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  646; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 CAGGTGAAACTGCAGCAGTCAGGACCTGAACTGGTGNAGCCTGGGGGCTTCAGTGAAGATA
                    AAGCAGAAGTTCAAGGGCAAGGCCACATTGACTGTAGACAAGTCCTCCAGCACAGCCTAC
                                                                                                                                                                                                                                                                                                               CAGCGGAGTAGTTACCCGCTCACGTTCGGTGCTGGGACACAGTTGGAAATAAAACGG
                                                                                                                                              ATGGAACTTGCCAGACTGACATCTGAGGATTCTGCCATCTATTACTGTGCAAGAGGGGCT
                                                                                                                                                                                                                                                                                            TCCTGCAAGACTTCTGGANACAAATTCACTGAATACACCATGCACTGGGTGAAGCAGAGC 120
                                                                                                                                                                    ATGGAGCTCCGCAGCCTGACATCTGAGGATTCTGCAGTCTATTACTGTGCAAGA---GAT
                                                                                                                                                                                                                  AACCAGAAGTTCAAGGGCAAAGGCCACAATGACTGTAGACAAATCCTCCAGCACAGCCTAT
                                                                                                                                                                                                                                                                                                                                                                    TCCTGCAAGGGTTCTGGCTACACATTCACTGATTATGCTATGCACTGGGTGAAGCAGAGT 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TCTTATTCTCTCACAATCAGCAGCATGGAGGCTGTAGATGCTGCCACTTATTACTGCCAT 660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCTTATTCTCTCACAATCAGCAGCATGGAGGCTGTAGATGCTGCCACTTATTACTGCCAT 660
ACTACGGTCCCGTTTGCTTACTGGGTCCAAGGGACCACGGTCACCGTCTCCTCAGGTGGA 357
                                                                                                                                                                                                                                                                                                                                                                                                                                          CAGGTCAAACTGCAGGAGTCAGGGGCTGAGCTGGTGAGGCCTGGGGTCTCAGTGAAGATT
                                                                      ACTATGTCCTACTTTGACTACTGGGGCCAAGTGACCACGGTCACCGTCTCCTCAGGTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CAGCGGAGTAGTTACCCGCTCACGTTCGGTGCTGGGACACAGTTGGAAATAAAACGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 593.4; DB 9;
Pred. No. 2.6e-187;
O: Mismatches 68;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                u
۲۰
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                717
                                                                        360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               600
 420
                                                                                                                                              300
                                                                                                                                                                                297
                                                                                                                                                                                                                    240
                                                                                                                                                                                                                                                        240
                                                                                                                                                                                                                                                                                            180
                                                                                                                                                                                                                                                                                                                              180
                                                                                                                                                                                                                                                                                                                                                                                                                                          60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              얶
```

```
WESULT 5
US-10-162-889-5
US-10-162-889-5
Sequence 5, Application US/10162889
Publication No. US20030077252A1
REPLICANT: SOLOMON, Beka
APPLICANT: SOLOMON, Beka
APPLICANT: HANAN, Eilat
TITLE OF INVENTION: AGENTS AND COMPOSITIONS AND METHODS UTILIZING SAME
TITLE OF INVENTION: USEPUL IN DIAGNOSING
CURRENT FILING DATE: 2002-66-06
FILE REFERENCE: SOLOMON=2B
CURRENT FILING DATE: 2002-66-06
PRIOR APPLICATION NUMBER: US/09/629,971
PRIOR APPLICATION NUMBER: US/09/629,971
PRIOR APPLICATION NUMBER: US/09/629,971
PRIOR APPLICATION NUMBER: US/09/473,653
PRIOR FILING DATE: 1999-12-29
PRIOR FILING DATE: 1999-12-29
PRIOR FILING DATE: 1999-09-03
NUMBER OF SEQ ID NOS: 29
ROTHARE SOLOMOS: 29
ROTHARE SOLOMOS: 29
ROTHARE SOLOMOS: 29
                                                      В
                                                                                            Ś
                                                                                                                                      밁
                                                                                                                                                                      Ş
                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                      S
                                                                                                                                                                                                                                                                                                                            á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local S
Matches 646
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOFTWARE: PatentIn version 3.0
SEQ ID NO 5
LENGTH: 717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: DNA
ORGANISM: Homo sapiens
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME/KEY: CDS
LOCATION: (1)..(717)
                                                                                                                                                                                                                                                                                                                                                                      Local Sin
hes 646;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        418
                      241
                                                            181
                                                                                                  181
                                                                                                                                      121
                                                                                                                                                                            121
                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                                                                                                        Similarity
ATGGAGCTCCGCAGCCTGACATCTGAGGATTCTGCAGTCTATTACTGTGCAAGA---
                                                                                                                                                                  TCCTGCAAGGGTTCTGGCTACACATTCACTGATTATGCTATGCACTGGGTGAAGCAGAGAT
                                                                                                                                                                                                                                                                                                                                CAGGTGAAACTGCAGCAGTCAGGACCTGAACTGGTGNAGCCTGGGGCTTCAGTGAAGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCTCTTATTCTCTCACAATCAGCAGCATGGAGGCTGTAGATGCTGCCACTTATTACTGC 657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TATGACACATCCAAACTGGCTTCTGGAGTCCCTGCTTCAGTGGCAGTGGGTCTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGTATAAGTTACATGCACTGGTACCAGCAGAAGCCTGTCACCTCCCCCAAAAGATGGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCAGCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGGCAGCTCA
                                                                                  AAGCAGAAGTTCAAGGGCAAGGCCACATTGACTGTAGACAAGTCCTCCAGCACAGCCTAC 240
                                                                                                                                      CAGGTCAAACTGCAGGAGTCAGGGGCTGAGCTGAGGCCTGGGGGTCTCAGTGAAGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CATCAGCGGAGTAGTTACCCGCTCACGTTCGGTGCTGGGACACAGTTGGAAATAAAA 714
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TATGACACATCCAAACTGGCTTCTGGAGTCCCTGCTCGGCTTCAGTGGCAGTGGGTCTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGTATAAGTTACATGCACTGGTATCAGCAGAAGCCAGGCACCTCCCCCAAAAGATGGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCAGCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGCCAGCTCA
                                                          AACCAGAAGTTCAAGGGCAAAGGCCACAATGACTGTAGACAAATCCTCCAGCACAGCCTAT 240
                                                                                                                                                                                                                                            TCCTGCAAGACTTCTGGANACAAATTCACTGAATACACCATGCACTGGGTGAAGCAGAGC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCTCTTATTCTCTCACAATCAGCAGCATGGAGGCTGAAGATGCTGCCACTTATTACTGC
                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                      82.8%;
90.1%;
                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                      Score 593.4; DB 14; Length Pred. No. 2.6e-187; O; Mismatches 68; Indels
                                                                                                                                                                                                                                                                                                                                                                                                          717;
                                                                                                                                                                                                                                                                                                                                                                      w
••
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        717
                                                                                                                                      180
                                                                                                                                                                          180
                                                                                                                                                                                                                120
                                                                                                                                                                                                                                                                                              60
                                                                                                                                                                                                                                                                                                                                  60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            537
```

```
Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
CURRENT APPLICATION NUMBER: 00/30-03-11
PRIOR APPLICATION NUMBER: 60/371,735
PRIOR APPLICATION NUMBER: 00/371,735
PRIOR FILING DATE: 2002-04-12
PRIOR APPLICATION NUMBER: 09/808,037
PRIOR APPLICATION NUMBER: 09/830,954
PRIOR APPLICATION NUMBER: 09/830,954
PRIOR FILING DATE: 2001-06-22
PRIOR APPLICATION NUMBER: 10/162,889
PRIOR FILING DATE: 2002-06-06
PRIOR APPLICATION NUMBER: 09/473,653
PRIOR FILING DATE: 1999-12-29
PRIOR APPLICATION NUMBER: 09/629,971
PRIOR APPLICATION NUMBER: 09/629,971
PRIOR APPLICATION NUMBER: 60/152,417
PRIOR APPLICATION NUMBER: 60/152,417
PRIOR PILING DATE: 1999-03
PRIOR APPLICATION NUMBER: 60/152,417
PRIOR FILING DATE: 1999-03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 6
US-10-384-788-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                         Sequence 5, Application US/10384788
publication No. US20040013647A1
GENERAL INFORMATION:
APPLICANT: SOLOMON, Beka
                                                                                                                                                                                                                                                                                                                                APPLICANT: FRENKEL, Dan
TITLE OF INVENTION: METHODS I
FILE REFERENCE: SOLOMON=2D.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            538 TATGACACATCCAAACTGGCTTCTGGAGTCCCTGCTCGCTTCAGTGGCAGTGGGTCTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                859
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               241 ATGGAACTTGCCAGACTGACATCTGAGGATTCTGCCATCTATTACTGTGCAAGAGGGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CATCAGCGGAGTAGTTACCCGCTCACGTTCGGTGCTGGGACACAGTTGGAAATAAAA 714
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCTCTTATTCTCTCACAATCAGCAGCATGGAGGCTGAAGATGCTGCCACTTATTACTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCTCTTATTCTCTCACAATCAGCAGCAGCATGGAGGCTGTAGATGCTGCCACTTATTACTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TATGACACATCCAAACTGGCTTCTGGAGTCCCTGCTCGCTTCAGTGGCAGTGGGTCTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AGTATAAGTTACATGCACTGGTATCAGCAGAAGCCAGGCACCTCCCCCAAAAGATGGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGTATAAGTTACATGCACTGGTACCAGCAGAAGCCTGTCACCTCCCCCAAAAGATGGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCAGCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGCCAGCTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCAGCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGGCAGCTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACTATGTCCTACTTGACTACTGGGGCCAAGTGACCACGGTCACCGTCTCCTCAGGTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACTACGGTCCCGTTTGCTTACTGGGTCCAAGGGACCACGGTCACCGTCTCCTCAGGTGGA
                                                                                                                                                                                                                                                                                                                                                       AND COMPOSITIONS FOR TREATING A PLAQUE-FORMING DISEASE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         357
```

```
PRIOR FILING DATE: 1999-09-03

PRIOR APPLICATION NUMBER: PCT/IL00/00518

PRIOR APPLICATION NUMBER: PCT/IL00/00518

PRIOR FILING DATE: 2000-08-31

NUMBER OF SEQ ID NOS: 3

SOFTWARE: PatentII version 3.2

SEQ ID NO 5

LENGTH: 717

TYPE: DNA

ORGANISM: Homo sapiens

FEATURE:

NAME/KEY: CDS

LOCATION: (1)..(717)

US-10-384-788-5

Query Match
Best Local Similarity 90.1%; Pred. No. 2.6e-187;

Matches 646; Conservative 0; Mismatches 68; Indels 3; Gaps 1;
```

Ş

밁 ð

밁 5 밁 Ş 밁

```
RESULT 7

US-10-618-856-5

Sequence 5, Application US/10618856

Publication No. US20040052766A1

GENERAL INFORMATION:

APPLICANT: SOLOMON, Beka
APPLICANT: FRENKEL, Dan

TITLE OF INVENTION: IMMUNIZATION AGAINST AMYLOID PLAQUES USING DISPLAY TECHNOLOGY

FILE REFERENCE: SOLOMON=2A

CURRENT APPLICATION NUMBER: US/10/618,856

CURRENT FILING DATE: 2003-07-15

PRIOR FILING DATE: 1999-12-29

PRIOR APPLICATION NUMBER: US 60/152,417

PRIOR FILING DATE: 1999-03

NUMBER OF SEQ ID NOS: 26

SOFTWARE: Patentin version 3.0

SOFTWARE: Patentin version 3.0

SOFTWARE: DNA
ORGANISM: Homo sapiens
FEATURE:
NAME/KEY: CDS
LOCATION: (1)..(717)
                                                                                                                                                                                                                                                                                                                                                                                                                       661
                                                                                                                                                                                                                                                                                                                                                                                                                                                  658
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CATCAGCGGAGTAGTTACCCGCTCACGTTCGGTGCTGGGACACAGTTGGAAATAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CCAGCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGGCAGCTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACTACGGTCCCGTTTGCTTACTGGGTCCAAGGGACCACGGTCACCGTCTCCTCAGGTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATGGAACTTGCCAGACTGACATCTGAGGATTCTGCCATCTATTACTGTGCAAGAGGGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATGGAGCTCCGCAGCCTGACATCTGAGGATTCTGCAGTCTATTACTGTGCAAGA---GAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAGCAGAAGTTCAAGGGCAAGGCCACATTGACTGTAGACAAGTCCTCCAGCACAGCCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCTCTTATTCTCTCACAATCAGCAGCATGGAGGCTGTAGATGCTGCCACTTATTACTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TATGACACATCCAAACTGGCTTCTGGAGTCCCCTGCTCGCTTCAGTGGCAGTGGGTCCTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AGTATAAGTTACATGCACTGGTACCAGCAGAAGCCTGTCACCTCCCCCCAAAAGATGGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCAGCAATCATCTCCTCCACGGGGAGAAGGTCACCATGACCTGCAGTGCCAGCTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACTATGTCCTACTTTGACTACTGGGGCCAAGTGACCACGGTCACCGTCTCCTCAGGTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TCCTGCAAGACTTCTGGANACAAATTCACTGAATACACCATGCACTGGGTGAAGCAGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGCTCTTATTCTCTCACAATCAGCAGCATGGAGGCTGAAGATGCTGCCACTTATTACTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TÄTGACACATCCAAACTGGCTTCTGGAGTCCCTGCTCCGCTTCAGTGGCAGTGGGTCTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGTATAAGTTACATGCACTGGTATCAGCAGAAGCCAGGCACCTCCCCAAAAGATGGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AACCAGAAGTTCAAGGGCAAGGCCACAATGACTGTAGACAAATCCTCCAGCACAGCCTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCCTGCAAGGGTTCTGGCTACACATTCACTGATTATGCTATGCACTGGGTGAAGCAGAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60
 Sequence 19, Application US/10259087A
publication No. US20030130190A1
GENERAL INFORMATION:
APPLICANT: Vanderbilt University
APPLICANT: Hallahan, Dennis E
APPLICANT: Qu, Shimian
TITLE OF INVENTION: IN VIVO PANNING FOR LIGANDS TO
FILE REFERENCE: 1242/47/2
CURRENT APPLICATION NUMBER: US/10/259,087A
CURRENT FILING DATE: 2002-09-27
PRIOR APPLICATION NUMBER: US 60/328123
NUMBER OF SEQ ID NOS: 20
SOFTWARE: Patentin version 3.1
SEQ ID NO 19
LENGTH: 726
                                                                                                                                                                                                                                                        RESULT 8
US-10-259-087A-19
                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                  片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-618-856-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local S
Matches 646
                                                                                                                                                                                                                                                                                                                                                     658
                                                                                                                                                                                                                                                                                                                                                                                      601
                                                                                                                                                                                                                                                                                                                                                                                                                   598
                                                                                                                                                                                                                                                                                                                                                                                                                                                  541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         646;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 CAGGTGAAACTGCAGCAGTCAGGACCTGAACTGGTGNAGCCTGGGGGCTTCAGTGAAGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAGCAGAAGTTCAAGGGCAAGGCCACATTGACTGTAGACAAGTCCTCCAGCACAGCCTAC 240
                                                                                                                                                                                                                                                                                                                                                                                   TCCTGCAAGGGTTCTGGCTACACATTCACTGATTATGCTATGCACTGGGTGAAGCAGAGT 120
                                                                                                                                                                                                                                                                                                                         CATCAGCGGAGTAGTTACCCATTCACGTTCGGAGGGGGGGCCAAGCTGGAAATAAAA
                                                                                                                                                                                                                                                                                                                                           CATCAGCGGAGTAGTTACCCGCTCACGTTCGGTGCTGGGACACACAGTTGGAAATAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGTATAAGTTACATGCACTGGTATCAGCAGAAGCCCAGGCACCTCCCCCCAAAAGATGGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TATGACACATCCAAACTGGCTTCTGGAGTCCCTGCTCGCTTCAGTGGCAGTGGGTCTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TATGACACATCCAAACTGGCTTCTGGAGTCCCTGCTCGCTTCAGTGGCAGTGGGTCTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGTATAAGTTACATGCACTGGTACCAGCAGAAGCCTGTCACCTCCCCCAAAAGATGGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CCAGCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGCCAGCTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCAGCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGGCAGCTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACTACGGTCCCGTTTGCTTACTGGGTCCAAGGGACCACGGTCACCGTCTCCTCAGGTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATGGAGCTCCGCAGCCTGACATCTGAGGATTCTGCAGTCTATTACTGTGCAAGA---GAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TCCTGCAAGACTTCTGGANACAAATTCACTGAATACACCATGCACTGGGTGAAGCAGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CAGGTCAAACTGCAGGAGTCAGGGGCTGAGCTGGGGGCCTGGGGGTCTCAGTGAAGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACTATGTCCTACTTTGACTACTGGGGCCAAGTGACCACGGTCACCGTCTCCTCAGGTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATGGAACTTGCCAGACTGACATCTGAGGATTCTGCCATCTATTACTGTGCAAGAGGGGCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AACCAGAAGTTCAAGGGCAAGGCCACAATGACTGTAGACAAATCCTCCAGCACAGCCTAT 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     82.8%;
90.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 593.4; DB 17;
Pred. No. 2.6e-187;
0; Mismatches 68;
                                                                                                                                                 TO RADIATION-INDUCED MOLECULES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ω
-:
                                                                                                                                                                                                                                                                                                                         717
                                                                                                                                                                                                                                                                                                                                                       714
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60
                                                                                                                                                                                                                                                                                                                                                                                      660
                                                                                                                                                                                                                                                                                                                                                                                                                   657
                                                                                                                                                                                                                                                                                                                                                                                                                                                    600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            120
```

S 밁 á В Ś 밁 S 밁 ફ B Ś В Ş 맑 S

밁

```
RESULT 9

US-10-689-006-19

Sequence 19, Application US/10689006

Publication No. US20040191249A1

GENERAL INFORMATION:
APPLICANT: Vanderbilt University
APPLICANT: Hallahan, Dennis B
APPLICANT: Mernaugh, Raymond
TITLE OF INVENTION: PHAGE ANTIBODIES
FILE REFERENCE: 1242/72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ; LOCATION: (1)..(726); OTHER INFORMATION: US-10-259-087A-19
                                                                                                                                                                             Ş
                                                                                                                                                                                                            밁
                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                       뫄
                                                                                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                                                                                                       뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                            뮸
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
Matches 635; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OTHER INFORMATION: Artificial FEATURE: NAME/KEY: CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: DNA
ORGANISM: Artificial
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     127
                                                                                                                                                                                                                                                                                                               487
                                                                                                                                                                                                                                                                                                                                                                                                               367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                   658
                                                                                                                                                                                                              607
                                                                                                                                                                                                                                    598
                                                                                                                                                                                                                                                             547
                                                                                                                                                                                                                                                                                      538
                                                                                                                                                                                                                                                                                                                                      478
                                                                                                                                                                                                                                                                                                                                                               427
                                                                                                                                                                                                                                                                                                                                                                                       418
                                                                                                                                                                                                                                                                                                                                                                                                                                        358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CAGGTGAAACTGCAGCAGTCAGGACCTGAACTGGTGNAGCCTGGGGCTTCAGTGAAGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCCTGCAAGACTTCTGGANACAAATTCACTGAATACACCATGCACTGGGTGAAGCAGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CAGGTCAAGCTGCAGCAGTCAGGACCTGAGCTGGTAAAGCCTGGGGGCTTCAGTGAAGATG
                                                                                                                                                          TATGACACATCCAAACTGGCTTCTGGAGTCCCTGCTTCCGCTTCAGTGGCAGTGGGTCTGGG
                                                                                                                                                                                                                                                                                                                                                                             CCAGCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGGCAGCTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                ATGGAGCTCCGCAGCCTGACATCTGAGGATTCTGCAGTCTATTACTGTGCAAGA---GAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AATGAGAAGTTCAAAGGCAAGGCCGCACTGACTTCAGACAAATCCTCCAGCACAGCCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAGCAGAAGTTCAAGGGCAAGGCCACATTGACTGTAGACAAGTCCTCCAGCACAGCCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CCTGGGCAGGGCCTTGAGTGGATTGGATATTAATCCTTACAATGATGGTACTAAGTAC
                                                                                                                                                                                                                         ACCTCTTATTCTCTCACAATCAGCAGCATGGAGGCTGTAGATGCTGCCACTTATTACTGC
                                                                                                                                                                                                                                                                                                                             AGTATAAGTTACATGCACTGGTACCAGCAGAAGCCTGTCACCTCCCCCAAAAGATGGATT
                                                                                                                                                                                                                                                                                                                                                                 CCAACAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATAACCTGCAGTGCCAGCTCA
                                                                                                                                                                                                                                                                                                                                                                                                               GGCGGTTCAGGCGGAGGTGGCTGGCGGATCGGACATTGAGCTCACCCAGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AACTACGGTGCTTTGGACTACTGGGGCCCAAGGGACCACGGTCACCGTCTCCTCAGGTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACTACGGTCCCGTTTGCTTACTGGGTCCAAGGGACCACGGTCACCGTCTCCTCAGGTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCCTGCAAGGCTTCTGGATACACATTCACTAGCTATGTTATGCACTGGGTGAAGCAGAAG
                                                                                                                                                                                                                                                                                                               AGTGTAAGTTACATGCACTGGTTCCAGCAGAAGCCAGGCACTTCTCCCAAACCCTGGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  80.1%;
88.2%;
                     ANTIBODIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 574; DB 15;
Pred. No. 7.9e-181;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     antibody ligand number
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                     ö
                     RADIATION-INDUCIBLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                     NEOANTIGENS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        w
••
                                                                                                                                                                                     717
                                                                                                                                                                                                                                                                                                               546
                                                                                                                                                                                                                                                                                                                                      537
                                                                                                                                                                                                                                                                                                                                                                 486
                                                                                                                                                                                                                                                                                                                                                                                        477
                                                                                                                                                                                                                                                                                                                                                                                                                426
                                                                                                                                                                                                                                                                                                                                                                                                                                        417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60
                                                                                                                                                            726
                                                                                                                                                                                                              999
                                                                                                                                                                                                                                    657
                                                                                                                                                                                                                                                              909
```

```
CURRENT APPLICATION NUMBER: US/10/689,006
CURRENT FILING DATE: 2003-10-20
PRIOR APPLICATION NUMBER: US 09/914,605
PRIOR FILING DATE: 2001-08-30
PRIOR APPLICATION NUMBER: US 10/259,087
PRIOR FILING DATE: 2002-09-27
NUMBER OF SEQ ID NOS: 34
SOFTWARE: PatentIn version 3.2
SEQ ID NO 19
LENGTH: 726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; FEATURE:
; NAME/KEY: CDS
; LOCATION: (1)..(726)
US-10-689-006-19
                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ₽.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   문
 유
                                                  밁
                                                                      ঠ
                                                                                                 밁
                                                                                                                             Ş
                                                                                                                                                               밁
                                                                                                                                                                                   Ś
                                                                                                                                                                                                                  B
                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local S
Matches 635
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LENGTH: 726
TYPE: DNA
ORGANISM: Artificial
PEATURE:
OTHER INFORMATION: Ar
                                                                                                                                                                                                                                                                                                                               307
 667
                                                     607
                                                                                865
                                                                                                         547
                                                                                                                                      538
                                                                                                                                                               487
                                                                                                                                                                                          478
                                                                                                                                                                                                                     427
                                                                                                                                                                                                                                                418
                                                                                                                                                                                                                                                                          367
                                                                                                                                                                                                                                                                                                  358
                                                                                                                                                                                                                                                                                                                                                                                                            241
                                                                                                                                                                                                                                                                                                                                                                                                                                       187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          al Similarity 88.:
635; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 CAGGTGAAACTGCAGCAGTCAGGACCTGAACTGGTGNAGCCTGGGGCTTCAGTGAAGATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAGCAGAAGTTCAAGGGCAAGGCCACATTGACTGTAGACAAGTCCTCCAGCACAGCCTAC
CAACAGTGGAGTAGTTACCCACTCACGTTCGGAAGGGGGGGACCAAGCTGGAAATAAAACGG
                CATCAGCGGAGTAGTTACCCGCTCACGTTCGGTGCTGGGACACAGTTGGAAATAAAACGG
                                                                   ACCTCTTATTCTCTCACAATCAGCAGCAGCATGGAGGCTGTAGATGCTGCCACTTATTACTGC
                                                                                                                          TATGACACATCCAAACTGGCTTCTGGAGTCCCTGCTCGCTTCAGTGGCAGTGGGTCTGGG
                                                                                                                                                                                                                                    | CCAGCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGGCAGCTCA
                                                                                                                                                                                                                                                                                          AACTACGGTGCTTTGGACTACTGGGGGCCAAGGGACCACGGTCACCGTCTCCTCAGGTGGA
                                                                                                                                                                                                                                                                                                                                                                                                ATGGAGCTCCGCAGCCTGACATCTGAGGATTCTGCAGTCTATTACTGTGCAAGA---GAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCTGGGCAGGGCCTTGAGTGGATTGGATATATTAATCCTTACAATGATGGTACTAAGTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCCTGCAAGGCTTCTGGATACACATTCACTAGCTATGTTATGCACTGGGTGAAGCAGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCCTGCAAGACTTCTGGANACAAATTCACTGAATACACCATGCACTGGGTGAAGCAGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CAGGTCAAGCTGCAGCAGTCAGGACCTGAGCTGGTAAAGCCCTGGGGCTTCAGTGAAGATG
                                                                                                           TATGGCACATCCAACCTGGCTTCTGGAGTCCCTGTTCGCTTCAGTGGCAGTGGATCTGGG
                                                                                                                                                                               AGTATAAGTTACATGCACTGGTACCAGCAGAAGCCTGTCACCTCCCCCAAAAGATGGATT
                                                                                                                                                                                                                        CCAACAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATAACCTGCAGTGCCAGCTCA
                                                                                                                                                                                                                                                                                                                                                                                   ATGGAGCTCAGCAGCCTGAGCACTCTGAGGACTCTGCGGTCTATTACTGTGCAAGATTTGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                       AATGAGAAGTTCAAAGGCAAGGCCGCACTGACTTCAGACAAATCCTCCAGCACAGCCTAC
                                                                                                                                                               AGTGTAAGTTACATGCACTGGTTCCAGCAGAAGCCAGGCACTTCTCCCAAACCCTGGATT
                                                                                                                                                                                                                                                                                                                                                        ACTACGGTCCCGTTTGCTTACTGGGTCCAAGGGACCACGGTCACCGTCTCCTCAGGTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Artificial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        80.1%;
88.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 574; DB Pred. No. 7.9e 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ant ibody
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ligand
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 18;
.9e-181;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           82;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      number
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ω
••
                                                                                                                                                                                                                                                  477
                                                                                                                                                                                                                                                                                                                                366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60
                            717
                                                                                 657
                                                                                                                                       597
                                                                                                                                                                  546
                                                                                                                                                                                             537
                                                                                                                                                                                                                        486
                                                                                                                                                                                                                                                                             426
                                                                                                                                                                                                                                                                                                       417
                                                                                                                                                                                                                                                                                                                                                           357
                                                                                                                                                                                                                                                                                                                                                                                      306
                                                                                                                                                                                                                                                                                                                                                                                                               297
                                                                                                                                                                                                                                                                                                                                                                                                                                          246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              186
                                                        999
```

RESULT

```
Sequence 23, Application US/10689006
Publication No. US20040191249A1
GENERAL INFORMATION:
APPLICANT: Vanderbilt University
APPLICANT: Vanderbilt University
APPLICANT: Vanderbilt University
APPLICANT: Wernaugh, Raymond
TITLE OF INVENTION: PHAGE ANTIBODIES TO RADIATION-INDUCIBLE NEOANTIGENS
FILE REFERENCE: 1242/72
CURRENT APPLICATION NUMBER: US/10/689,006
CURRENT FILING DATE: 2003-10-20
PRIOR APPLICATION NUMBER: US 9/914,605
PRIOR FILING DATE: 2001-08-30
PRIOR FILING DATE: 2001-09-27
NUMBER OF SEQ ID NOS: 34
SOFTWARE: Patentin version 3.2
LENGTH: 786
TYPE: DNA
ORGANISM: artificial
S
                          밁
                                                          ð
                                                                                               당
                                                                                                                     ક
                                                                                                                                                            밁
                                                                                                                                                                                          ş
                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                        문
                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                 ð
                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; NAME/KEY: CDS
; LOCATION: (1)..(786)
US-10-689-006-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-689-006-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURE:
OTHER INFORMATION: nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   629;
   595
                               547
                                                               535
                                                                                                 487
                                                                                                                               475
                                                                                                                                                             427
                                                                                                                                                                                             415
                                                                                                                                                                                                                             367
                                                                                                                                                                                                                                                           355
                                                                                                                                                                                                                                                                                             307
                                                                                                                                                                                                                                                                                                                           295
                                                                                                                                                                                                                                                                                                                                                           247
                                                                                                                                                                                                                                                                                                                                                                                         241
                                                                                                                                                                                                                                                                                                                                                                                                                       187
                                                                                                                                                                                                                                                                                                                                                                                                                                                       181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   μ
                                                                                                                                                                                                                                                                                                                                                                                                                                          AAGCAGAAGTTCAAGGGCAAGGCCACATTGACTGTAGACAAGTCCTCCAGCACAGCCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AATGGAAAGAGCCTTGAGTGGATTGGAACTATTGATCCTTACTATGGTGGTACTAGCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TCCTGCAAGACTTCTGGANACAAATTCACTGAATACACCATGCACTGGGTGAAGCAGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CAGGTGAAACTGCAGCAGTCAGGACCTGAACTGGTGNAGCCTGGGGCTTCAGTGAAGATA
 GGGACCTCTTATTCTCTCACAATCAGCAGCATGGAGGCTGTAGATGCTGCCACTTATTAC
                                                                                                                                                                                                                           GGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCGGATCGGACATTGAGCTCACCCAG
                                                                                                                                                                                                                                                          GGTTACTACGGAGGGTTTTCTTACTGGGGCCAAGGGACCATGGTCACCGTCTCCTCAGGT
                                                                                                                                                                                                                                                                                                                         GATACTACGGTCCCGTTTGCTTACTGGGTCCAAGGGACCACGGTCACCGTCTCCTCAGGT 354
                                                                                                                                                                                                                                                                                                                                                                                      ATGGAGCTCCGCAGCCTGACATCTGAGGATTCTGCAGTCTATTACTGTGCAAGA-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCCTGCAAGGCTTCTGGATACACATTCACTAGCTATGTTATGCACTGGGTGAAGCAGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CAGGTGAAGCTGCAGCAGTCTGGACCTGAGCTGGTAAAGCCTGGGGGCTTCAGTGAAGATG
                                                  ATTTATGACACATCCAAACTGGCTTCTGGAGTCCCTGCTCGCTTCAGTGGCAGTGGGTCT
                                                                                                 TCAAATGTAAAGTACATGTACTGGTACCAGCAGAAGTCAGGTGCCTCCCCCAAACTATGG
                                                                                                                   TCAAGTATAAGTTACATGCACTGGTACCAGCAGAAGCCTGTCACCTCCCCCCAAAAGATGG
                                                                                                                                                                                            TCTCCAGCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGGCAGC
                                                                                                                                                                                                                                                                                                                                                         ATACAGCTCAAGAGCCTGACATCTGAGGACTCTGCAGTCTATTACTGTGCAAGATGGGAT
                                                                                                                                                                                                                                                                                                                                                                                                                       AACCAGAAGTTCAAGGGCAAGGCCACATTGACTGTAGACAAATCCTCCACCACGGCCTAC
                                 ATTTATTACACATCCAACCTGGCTTCTGGAGTCCCAGCTCGCTTCAGTGGCAGTGGGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  78.3%; ilarity 87.0%; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ٥,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 561.4; DB 18;
Pred. No. 1.3e-176;
0; Mismatches 88;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 encoding scFv antibody
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  6,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                       240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       126
 654
                               606
                                                               594
                                                                                               546
                                                                                                                                                             486
                                                                                                                                                                                             474
                                                                                                                                                                                                                             426
                                                                                                                                                                                                                                                          414
                                                                                                                                                                                                                                                                                           366
                                                                                                                                                                                                                                                                                                                                                                                        294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    66
                                                                                                                                                                                                                                                                                                                                                                                                                       246
```

```
문
                                                                 S
                                                                                                       밁
                                                                                                                               Ş
                                                                                                                                                                         밁
                                                                                                                                                                                                       á
                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                   유
                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                       맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 11
US-10-259-087A-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-10-259-087A-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Vanderbilt University
APPLICANT: Hallahan, Dennis E
APPLICANT: Hallahan, Dennis E
APPLICANT: Qu, Shimian
TITLE OF INVENTION: IN VIVO PANNING FOR LIGANDS TO RADIATION-INDUCED
FILE REFERENCE: 1242/47/2
CURRENT APPLICATION NUMBER: US/10/259,087A
CURRENT FILING DATE: 2002-09-27
PRIOR APPLICATION NUMBER: US 60/328123
PRIOR APPLICATION NUMBER: US 60/328123
PRIOR FILING DATE: 2001-10-03
NUMBER OF SEQ ID NOS: 20
SOFTWARE: Patentin version 3.1
SEQ ID NO 17
FILING ID NO 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 17, App. Publication No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches 622;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURE:
NAME/KEY: CDS
LOCATION: (1)..(726)
OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: DNA
ORGANISM: Artificial Sequence
FEATURE:
OTHER INFORMATION: Artificial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local
                                  367
                                                                                                       307
                                                                                                                                                                                                                                              187
 418
                                                                   358
                                                                                                                                                                          247
                                                                                                                                                                                                  241 ATGGAGCTCCGCAGCCTGACATCTGAGGATTCTGCAGTCTATTACTGTGC---AAGAGAT 297
                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                   127
                                                                                                                                                                                                                                                                                                                                                   121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       607
                                                                                                                                        298
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 715
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  727
                                                                                                                                                                                                                                                                                                                                                                                      67
                                                                                                                                                                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ш
                                                                                                                                                                                                                                                                                                                                                                                                                                                         7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           77.2%;
Similarity 86.4%;
                                                        AAGCAGAAGTTCAAGGGCAAGGCCACATTGACTGTAGACAAGTCCTCCAGCACAGCCTAC 240
                                                                                                                                                                                                                                                                                                                                                  TCCTGCAAGACTTCTGGANACAAATTCACTGAATACACCATGCACTGGGTGAAGCAGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CAGGTGAAACTGCAGCAGTCAGGACCTGAACTGGTGAAGCCTTGGGGCTTCAGTGAAGATA 60
CCAGCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGGCAGCTCA 477
                                                                                                     TACTATAGCGCATTTGATTACTGGGGCCAAGGGACTACGGTCACCGTCTCCTCAGGTGGA
                                                                                                                                 ACTACGGTCCCGTTTGCTTACTGGGTCCAAGGGACCACGGTCACCGTCTCCAGGTGGA
                                  GGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCGGATCGGACATTGAGCTCACCCAGTCT
                                                                                                                                                                                                                                              AATCAAAAGTTCAAGGGCAAGGCCACATTGACTGTAGACGAATCCTCCAGCACAGCCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                         CAGGTGAAACTGCAGCAGTCTGGGGCTGAGCTTGTGATGCCTGGGGCTTCAGTGAAGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGGACCTCTTATTCTCTCACAATCAGCAGCGTGGAGGCTGAAGATGCTGCCACTTATTAC
                                                                                                                                                                          ATGCAGCTCAGCAGCCTGACATCTGAGGACTCTGCGGTCTATTACTGTGCAAGAAGAGGC 306
                                                                                                                                                                                                                                                                                                                   CCTGGACAAGGCCTTGAGTGGATCGGAGCGATTGATACTTCTGATAGTTATACTAGCTAC
                                                                                                                                                                                                                                                                                                                                                                                      TCCTGCAAGGCTTCTGGCTACACATTCACTGACTACTGGATGCACTGGGTGAAGCAGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 င္ပင္ပ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TGCCAGCAGTTTACTAGTTCCCCGTATACGTTCGGATCGGGCACCAAGCTGGAAATCAAA 726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGCCATCAGCGGAGTAGTTACCCGCTCACGTTCGGTGCTGGGACACAGTTGGAAATAAAA 714
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Application US/10259087A
vo. US20030130190A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Artificial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 553.2; DB 15;
Pred. No. 7.1e-174;
0; Mismatches 95;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     antibody ligand number 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 726;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ω
--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MOLECULES
                                                                     417
                                  426
                                                                                                     366
                                                                                                                                      357
                                                                                                                                                                                                                                                                                                                                                                                                                       120
                                                                                                                                                                                                                                              246
                                                                                                                                                                                                                                                                                                                   186
                                                                                                                                                                                                                                                                                                                                                   180
                                                                                                                                                                                                                                                                                                                                                                                      126
                                                                                                                                                                                                                                                                                                                                                                                                                                                       66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       666
```

```
RESULT 12
US-10-689-006-17
US-10-689-006-17
; Sequence 17, Application US/10689006
; Publication No. US20040191249A1
; GENERAL INFORMATION:
                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
밁
                    S
                                                   밁
                                                                            Ş
                                                                                                       밁
                                                                                                                           Š
                                                                                                                                                           밁
                                                                                                                                                                                                              맑
                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                    ; NAME/KEY: CDS
; LOCATION: (1)..(726)
US-10-689-006-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           맒
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       멍
                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION NUMBER: US 10/259,087
PRIOR FILING DATE: 2002-09-27
NUMBER OF SEQ ID NOS: 34
SOFTWARE: PatentIn version 3.2
SEQ ID NO 17
LENGTH: 726
                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Vanderbilt University
APPLICANT: Hallahan, Dennis E
APPLICANT: Mernaugh, Raymond
TITLE OF INVENTION: PHAGE ANTIBODIES TO RADIATION-INDUCIBLE NEOANTIGENS
FILE REFERENCE: 1242/72
FULL REFERENCE: 1242/72
CURRENT APPLICATION NUMBER: US/10/689,006
CURRENT FILING DATE: 2003-10-20
PRIOR APPLICATION NUMBER: US 09/914,605
PRIOR FILING DATE: 2001-08-30
PRIOR FILING DATE: 2001-08-30
                                                                                                                                                                                                                                                                                                                                                               FEATURE
                                                                                                                                                                                                                                                                                                                                                                         FEATURE: OTHER INFORMATION: Artificial antibody
                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: DNA
ORGANISM: Artificial
                                                                                                                                                                                                                                                                 622;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   658
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          538
                                                    187
                                                                              181
                                                                                                         127
                                                                                                                                121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           667
 247
                          241
                                                                                                                                                            67
                                                                                                                                                                                      61
                                                                                                                                                                                                               7
                                                                                                                                                                                                                                       Н
                                                                                                                                                                                                                              CAGGTGAAACTGCAGCAGTCAGGACCTGAACTGGTGNAGCCTGGGGCTTCAGTGAAGATA 60
                                                                                                                             AGTGTAAGCTACATGCACTGGTTCCAGCAGAAGTCAGGCACCTCCCCCAAACCCTGGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATGGAGCTCCGCAGCCTGACATCTGAGGATTCTGCAGTCTATTACTGTGC---AAGAGAT 297
                                                                            AAGCAGAAGTTCAAGGGCAAGGCCACATTGACTGTAGACAAGTCCTCCAGCACAGCCTAC 240
                                                                                                                                                                           TCCTGCAAGACTTCTGGANACAAATTCACTGAATACACCATGCACTGGGTGAAGCAGAGC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTGCAGAGGAGTAGTTACCCGTACACGTTTGGAGCTGGCACCAAGCTGGAAATCAAACGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CATCAGCGGAGTAGTTACCCGCTCACGTTCGGTGCTGGGACACACGTTGGAAATAAAACGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCTCTTATTCTCTCACAATCAGCAGCATGGAGGCTGTAGATGCTGCCACTTATTACTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TATGACACATCCAAGCTGGCTTCTGGAGTCCCAGATCGCTTCAGTGGCAGTGGGTCTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TATGACACATCCAAACTGGCTTCTGGAGTCCCTGCTCGCTTCAGTGGCAGTGGGTCTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGTATAAGTTACATGCACTGGTACCAGCAGAAGCCTGTCACCTCCCCCAAAAGATGGATT
                                                                                                      CCTGGACAAGGCCTTGAGTGGATCGGAGCGATTGATACTTCTGATAGTTATACTAGCTAC
                                                                                                                                                                                                              CAGGTGAAACTGCAGCAGTCTGGGGGCTTGAGCTTGTGATGCCTGGGGGCTTCAGTGAAGATG 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCTCTTATTCTCTCACAATCAGCTCCATGGAGGCTGAAGATGCTGCTACTTATTACTGT
                                                                                                                                                           TCCTGCAAGGCTTCTGGCTACACATTCACTGACTACTGGATGCACTGGGTGAAGCAGAGG 126
                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                             77.2%;
                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                Score 553.2; DB 18
Pred. No. 7.1e-174;
0; Mismatches 95;
                                                                                                                                                                                                                                                                                                                                                                         ligand
                                                                                                                                                                                                                                                                                          DB 18;
                                                                                                                                                                                                                                                                                                                                                                          number
                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                                          726;
                                                                                                                                                                                                                                                                 ω
--
                                                                                                                                                                                                                                                                Gaps
                                                                                                      186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         486
                                                    246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                    Ş
                                                    밁
                                                                            á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 13
US-10-408-930-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
밁
                                                                                                      맑
                                                                                                                            Ş
                                                                                                                                                                                                                 US-10-408-930-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION APPLICANT: Coia, e
                                                                                                                                                           Matches 610;
                                                                                                                                                                       Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                      LENGTH: 807
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         367
 130
                          122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            307
                                                    70
                                                                             62
                                                                                                       10
                                                                                                                                N
                        ATGCCAAGAGTCTAGAGTGGATTGGACTTATTAGTAATTCCTTTGGTAATACAAACTACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              et al
```

```
298
CTGCAGAGGAGTAGTTACCCGTACACGTTTGGAGCTGGCACCAAGCTGGAAATCAAACGG
                                CATCAGCGGAGTAGTTACCCCGCTCACGTTCGGTGCTGGGACACAGTTGGAAATAAAACGG
                                                                                                                                         ACCTCTTATTCTCTCACAATCAGCAGCATGGAGGCTGTAGATGCTGCCACTTATTACTGC
                                                                                                                                                                                                         TATGACACATCCAAGCTGGCTTCTGGAGTCCCAGATCGCTTCAGTGGCAGTGGGTCTGGG
                                                                                                                                                                                                                                          TATGACACATCCAAACTGGCTTCTGGAGTCCCTGCTCGCTTCAGTGGCAGTGGGTCTGGG
                                                                                                                                                                                                                                                                                                                                                                AGTATAAGTTACATGCACTGGTACCAGCAGAAGCCTGTCACCTCCCCCAAAAGATGGATT
                                                                                                                                                                                                                                                                                                                                                                                                                   CCAACAACCATGGCTGCATCTCCAGGAGAGAAGGTCACCATCACCTGCCGTGCCAGCTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCAGCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGGCAGCTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCGGATCGGACATTGAGCTCACCCAGTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TACTATAGCGCATTTGATTACTGGGGCCAAGGGACTACGGTCACCGTCTCCTCAGGTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACTACGGTCCCGTTTGCTTACTGGGTCCAAGGGACCACGGTCACCGTCTCCTCAGGTGGA
                                                                                                      ACCTOTTATTOTOTOACAATOAGOTCOATGGAGGCTGAAGATGCTGCTACTTATTACTGT
                                                                                                                                                                                                                                                                                                             AGTGTAAGCTACATGCACTGGTTCCAGCAGAAGTCAGGCACCTCCCCCAAACCCTGGATT
                                                                                                                                                                                                                                                                                                                                                                537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            417
                                                     717
                                                                                                      666
                                                                                                                                                         657
                                                                                                                                                                                                            606
                                                                                                                                                                                                                                                               597
                                                                                                                                                                                                                                                                                                               546
                                                                                                                                                                                                                                                                                                                                                                                                                   486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               366
     726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            426
```

CURRENT APPLICATION NUMBER: US/10/408,930
CURRENT FILING DATE: 2003-04-07
PRIOR APPLICATION NUMBER: PCT/AU99/00341
PRIOR FILING DATE: 1999-05-07
PRIOR FILING DATE: 1999-05-07
PRIOR FILING DATE: 2000-12-11
PRIOR APPLICATION NUMBER: AU PD3445
PRIOR APPLICATION NUMBER: AU PD3445
PRIOR FILING DATE: 1998-05-08
NUMBER OF SEQ ID NOS: 38
SOFTWARE: PATENTIN VERSION 3.0
SEQ ID NO 407 Sequence 4, Application US/10408930 Publication No. US20030170820A1 TITLE OF INVENTION: CONTINUOUS IN-VITRO EVOLUTION FILE REFERENCE: 674537-2003.1 TYPE: DNA
ORGANISM: Homo Sapeins
FEATURE:
NAME/KEY: misc\_feature
LCCATION: (1)..(807)
OTHER INFORMATION: Sequence of the anti-hepatitis surface antigen (4C2) scFv CCTGCAAGACTTCTGGANACAAATTCACTGAATACACCATGCACTGGGTGAAGCAGAGCC ATGTGAAGCTTCAGGAGTCAGGGCCTGAGCTGGTGAGGCCCCGGGGTCTCAGTGAAGATTA AGGTGAAACTGCAGCAGTCAGGACCTGAACTGGTGNAGCCTGGGGCTTCAGTGAAGATAT Conservative 76.4%; 85.2%; 0; Score 547.6; DB 16; Pred. No. 5.5e-172; 0; Mismatches 106; Indels Length 0; Gaps

181

189

121 69 61

0

```
Sequence 1, Application US/10247488

Publication No. US20030022244A1

GENERAL INFORMATION:
APPLICANT: RAMOT UNIVERSITY AUTHORITY FOR APPLIED RESEARCH & TITLE OF INVENTION: SINGLE CHAIN ANTIBODY AGAINST MUTANT P53

FILE REFERENCE: 1196336-RAMOT

CURRENT APPLICATION NUMBER: US/10/247,488

CURRENT FILING DATE: 2002-09-20

PRIOR APPLICATION NUMBER: US/09/526,738

PRIOR FILING DATE: 2000-03-16

NUMBER OF SEQ ID NOS: 8

SOFTWARE: PATENTIN Ver. 2.1

SEQ ID NO

LENGTH: 771
                                                                                       ફ
   밁
                      ર્
                                                           밁
                                                                                                                       밁
                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    र्
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ર્
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                 US-10-247-488-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 14
US-10-247-488-1
                                                                                                                                                                                  Query Match
Best Local S
Matches 609
                                                                                                                                                                                                                                                       LENGTH: 771
TYPE: DNA
ORGANISM: Humanus
                                                                                                                                                                                    609;
                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         670
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           490
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       430
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          250
   121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     182
                                                              61
                                                                                         61
                                                                                                                                                  \vdash
                                                                                                                                                                                                 Similarity
                   TCCTGCAAGACTTCTGGANACAAATTCACTGAATACACCATGCACTGGGTGAAGCAGAGC 120
                                                                                                                                       CAGGTGAAACTGCAGCAGTCAGGACCTGAACTGGTGNAGCCTGGGGCTTCAGTGAAGATA
                                                                                                                      CAGGTCAAACTGCAGCAGTCTGGGGGCTGAACTGGCAAAACCTGGGGCCTCAGTGAAGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGCGGAGTAGTTACCCGCTCACGTTCGGTGCTGGGACACAGTTTGGAAATAAAACGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTCACTCTCACAATCAGCAGCTTGGAGGCTGAAGATGCTGCCACTTATTACTGCCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTTATTCTCTCACAATCAGCAGCATGGAGGCTGTAGATGCTGCCACTTATTACTGCCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TAAGTTACATGCACTGGTACCAGCAGAAGCCTGTCACCTCCCCCAAAAGATGGATTTATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CAATCATGTCTGCATCTCCAAGGGAGAAGGTCACCATGACCTGCAGTGGCAGCTCAAGTA 481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CGGTCCCGTTTGCTTACTGGGTCCCAAGGGACCACGGTCACCGTCTCCTCAGGTGGAGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGGAGCTCCGCAGCCTGACATCTGAGGATTCTGCAGTCTATTACTGTGCAAGAGATACTA 301
CCTGGACAGGGTCTGGATTGGATACATTAATCCTACCACTGGTTATACTAAGTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACTGGAGTAGTAACCCTCCCACGTTCGGTGCTGGGACCAAGCTGGAAATAAAACGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACACATCCAAACTGGCTTCTGGAGTCCCTGCTCGCTTCAGTGGCAGTGGGTCTGGGACCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CAATCATGTTCGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGCCAACTCACGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GTTCAGGCGGAGGTGGCTCTGGCGGTGGCGGATCGGACATTGTGCTGACCCAATCTCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACTEGTCCTTCGATGTCTGGGGCCAAGGGACCACGGTCACCGTCTCCTCAGGTGGAGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGGAACTTGGCAGATTGACATCTGAGGATTCTGCCATCTATTACTGTGCAAGAGTGATCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGCAGAAGTTCAAGGGCAAGGCCACATTGACTGTAGACAAGTCCTCCAGCACAGCCTACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TCAGGTACGTGCACTGGTACCAACAGAAGTCAGGCACCTCCCCCAAAAGATGGATTTATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCAGAAGTTTGAGGCCAAGGCCACAATGACTGTAGACAAATCCTCCAACACAGGCTATT
                                                                                                                                                                                    Conservative
                                                                                                                                                                                                 74.5%;
84.9%;
                                                                                                                                                                                  <u>.</u>
                                                                                                                                                                               Score 534.2; DB 14;
Pred. No. 1.6e-167;
0; Mismatches 105;
                                                                                                                                                                                 Indels
                                                                                                                                                                                                             Length
                                                                                                                                                                                 ω
--
                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        725
 180
                                                           120
                                                                                                                       60
                                                                                                                                                    60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  429
                                                                                                                                                                                                                                       APPLICANT: RAMOT UNIVERSITY AUTHORITY FOR APPLIED RESEARCH & TITLE OF INVENTION: SINGLE CHAIN ANTIBODY AGAINST MUTANT P53 FILLE REFERENCE: 1196336-RAMOT CURRENT APPLICATION NUMBER: US/10/247,488 CURRENT FILING DATE: 2002-09-20 PRIOR APPLICATION NUMBER: US/99/526,738 PRIOR APPLICATION NUMBER: US/99/526,738 PRIOR FILING DATE: 2000-03-16 NUMBER: US/09/526,738 PRIOR APPLICATION DUMBER: US/09/526,738 PRIOR APPLICATION BY SOUTHARE: PATENTIAL STATE OF SEQ ID NOS: 8 SOFTWARE: PATENTIAL VET. 2.1 SEQ ID NO 3 LENGTH: 780 TYPE: DNA ORGANISM: Humanus US-10-247-488-3
밁
                    र्
                                                         밁
                                                                              S
                                                                                                                  밁
                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 15
US-10-247-488-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ઇ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; Sequence 3, Application US/10247488 ; Publication No. US20030022244A1 ; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                 Query Match
Best Local Similarity
Matches 609; Conserv
 127
                 661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      658
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     181
                                                           67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181
                                                                                       61
                                                                                                                       7
                                                                                                                                                 -
                                                                                                                                         CAGGTGAAACTGCAGCAGTCAGGACCTGAACTGGTGNAGCCTGGGGCTTCAGTGAAGATA
                                                                           TCCTGCAAGACTTCTGGANACAAATTCACTGAATACACCATGCACTGGGTGAAGCAGAGC
                                                                                                                      CAGGTCAAACTGCAGCAGTCTGGGGGCTGAACTGGCCAAAACCTGGGGCCTCAGTGAAGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GACACATCCAAACTGGCTTCTGGAGTCCCTGCTCGCTTCAGTGGCAGTGGGTCTGGGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATAAGTTACATGCACTGGTACCAGCAGAAGCCTGTCACCTCCCCCAAAAGATGGATTTAT
 CCTGGACAGGGTCTGGAATGGATTGGATACATTAATCCTACCACTGGTTATACTAAGTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CAAAGGAGTAGTTACCCATACACGTTCGGAGGGGGCACCAAGCTGCAAATCAAAACGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCTTATTCTCTCACAATCAGCAGCATGGAGGCTGTAGATGCTGCCACTTATTACTGCCAT 660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGGCAGCTCAAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCCTGCAAGACTTCTGGCTACACCTTTACTAGCTACTGGATGAACTGGGTAAAACAGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CAGCGGAGTAGTTACCCGCTCACGTTCGGTGCTGGGACACAGTTGGAAATAAAACGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCTTACTCTCACAATCAGCCGGATGGAGGCTGAAGATGCTGCCACTTATTACTGCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGCACATCCAACCTGGCTTCTGGAGTCCCTGCTCGGTTCAGTGGCAGTGGATCTGGGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GTAAATTACATGCACTGGTTCCAGCAGAAGCCAGGCACTTCTCCCAAACTCTGGATTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TC---TTATTTTGACTACTGGGGCCAAGGGACCACGGTCACCGTCTCCTCAGGTGGAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACGGTCCCGTTTGCTTACTGGGTCCAAGGGACCACGGTCACCGTCTCCTCAGGTGGAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATGCAACTGAGCAGCCTGACCAATGTGGACTCTGCAGTCTATTATTGTACAACTGGTTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATGGAGCTCCGCAGCCTGACATCTGAGGATTCTGCAGTCTATTACTGTGCAAGAGATACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AATCAGAAGTTCAAGGACAAGGCCACATTGACTGCAGACAAATCCTCCAGCACGGCCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAGCAGAAGTTCAAGGGCAAGGCCACATTGACTGTAGACAAGTCCTCCAGCACAGCCTAC
                                                                                                                                                                                 Conservative
                                                                                                                                                                                               74.5%;
                                                                                                                                                                             Score 534.2; DB 14;
Pred. No. 1.6e-167;
0; Mismatches 105;
                                                                                                                                                                                 Indels
                                                                                                                                                                                                            Length
                                                                                                                                                                                                             780;
                                                                                                                                                                               ű.
                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      714
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   717
                                                           126
                                                                                      120
                                                                                                                    66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      477
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     240
```

Search completed: February 19, 2005, 02:16:16 Job time : 466.472 secs 음 성

```
Minimum
Maximum
                                                                                                                                                                                                                                                                                                                          Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 s
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Run
                                                                                                                                                                                                                                                                                                                                                                                                                                     Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        욧
                                                                                                                                                                                      Result
                                                                                                                                                                                                                                                                                                              Database
                                                                                                                                                                                                                                                                                                                                                                              Total number
                                                                                                                                                                                                                                                                                                                                                                                            Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence:
                                                 0 0 0 0 0 0 0
                                                                                                               O
0000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       nucleic
                                                                                                                                                                                õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          on:
                                                                                                                                                                                                                 Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                        BB BB
Score
                                                                                                                                                                                                                                                                                                                                                       eq
eq
                                                                                                                                                                                                                                                                                                                                                                              e
E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      nucleic search,
                                                                                                                                                                                                                                             EST: 43: 455
                                                                                                                                                                                                                                                                                                                                                      length:
length:
                                                                                                                                                                                                                                                                                                                                                                             hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                         IDENTITY_NUC Gapop 10.0 ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                          February 18, 2005, 20:04:30 ; Search time 2571.88 Seconds (without alignments)
10611.722 Million cell updates
                                                                                                                                                                                                                                                                                                                                                                                                                                       US-10-075-947A-1
717
                                                                                                                                                                               Match
                                                                                                                                                                                                                                                                                                                                                                                           34239544 seqs, 19032134700 residues
                                                                                                                                                                                      Query
caggtgaaactgcagcagtc....
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen
                                                                                                                                                                                                                                             gb_est1:*
gb_htc:*
gb_htc:*
gb_est3:*
gb_est4:*
gb_est5:*
gb_est5:*
gb_est5:*
                                                                                                                                                                              Length
                                                                                                                                                                                                                                                                                                                                                        2000000000
멂
                                                                                                                                                                                                                                                                                                                                                                                                         Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      nsing
BF857861
BF957969
BQ373705
BI055323
BQ321980
BR9310337
BF855922
BF855923
BF955976
BI025870
BQ321312
                                                                                   CK632348
BQ328142
BI030095
BF923394
                                                                                                                CK633068
CK633069
CK629843
                                                                                                                                     CK629415
CK629414
                                                                                                                                                  CK629396
BQ474958
CK629846
                                                                                                                                                                              ID
                                                                                                                                                                                                                                                                                                                             summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
8
                                                                                                                                                                                                     SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       model
                                                                                                                                                                                                                                                                                                                                                                                                                               .cacagttggaaataaaacgg
                     BF857861
BF857860
BQ373705
BIO55323
BQ321980
BF801321
BQ310337
BF855922
BF923369
                                                                                                 CK632348
BQ328142
                                                                                                                      CK633068
                                                                                                                                     CK629415
CK629414
                                                                                                                                                  CK629396 AMO-AA001
BQ474958 carabus4g
CK629846 AM2-AA002
                                                                                                                                                                              Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                          cell updates/sec
AM3-AP001

AM2-AA002

AM0-AM000

MR4-RT004

QV4-NT024

QV1-FT020

QV1-FT020

QV1-FT017

RC0-GN023

MR1-CT072

MR0-C1002

MR0-C1002
                                                                                                                                    Carabus4g
AM2-AA002
AM1-AA001
AM1-AA001
                                                                                                                                                                                                                                                                   SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                  ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                             RESULT 1
CK629396/c
LOCUS
DEFINITION
                                                                                    FEATURES
                                                                                                                                                           COMMENT
                                                                                                                                                                                                                                        REFERENCE
                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
                                                                                                                                                                                                                                 AUTHORS
                                                                            source
                                                                                                                                                                                                                                                                                        sequence.
CK629396
CK629396.1
                                                                                                                Email: wilsonjr@usp.br
                                                                                                                                                                                      Silva, W.A. Jr
                                                                                                                                                                                                                                                             Eukaryota;
                                                                                                                                                                                                                                                     Neoptera; Endopterygota;
                                                                                                                                                                                                                                              Apidae; Apis.
                                                                                                                                                                                                                                        (bases 1 to 872)
                     'note="Organ:
                                                                                                                                                                                                                                                                                         GI:45753871
61.0%;
```

45	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25
292	292	292	293	293	293	293	293	293	293	293	293	293	293	293	293	293	293	293	293	293
40.7	40.7	•			40.9	40.9	40.9	40.9	40.9	40.9	40.9	40.9	40.9						40.9	
458	455	407	473	464	462	461	460	459	458	457	455	454	449	449	448	445	439	437	427	424
4	4.	v	S	4.	4	4	v	4	4	v	4	N	S	v	ഗ	ഗ	v	ഗ	N	ហ
BI063593	BI030093	BQ328151	BQ321749	BI043086	BI030046	BI043087	BQ321747	BI025872	BI029994	BQ337457	BI030044	BF836107	BQ372280	BQ321309	BQ321310	BQ321751	BQ321297	BQ321307	BF752315	BQ376239
BI063593	BI030093	BQ328151	BQ321749	BI043086	BI030046	BI043087	BQ321747	BI025872	BI029994	BQ337457	BI030044	BF836107	BQ372280	BQ321309	BQ321310	BQ321751	BQ321297	BQ321307	BF752315	BQ376239
IL3-UT011	ILO-MT035	MR4-RT004	MR1-CT052	QV1-OT017	ILO-MT034	QV1-OT017	MR1-CT052	ILO-MT036	IL0-MT034	IL0-MT035	ILO-MT034	QV4-HT101	RC0-FN018	RC0-CT047	RC0-CT047	MR1-CT052	QV1-CT041	RC0-CT047	RC3-BN042	MR4-TN010

## ALIGNMENTS

```
Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Open reading frame ESTs - an efficient strategy fo honey bee transcriptome Unpublished (2004)
Contact: Silva Jr, W. A. Molecular Genetic and Bioinformatics Laboratory Departament of Genetics, FMRP/USP, FUNDHERP Rua Tenente Catao Roxo, 2501, CEP 14051-140, Brazi Tel: +55 16 39639309
Fax: +55 16 39639309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Nunes, F.M.F., Valente, V., Sousa, J.F., Cunha, M.A.V., Pinheiro, D.G., Martin, R.M., Araujo, D.D., Costa, M.C.R., Martins, W.K., Carvalho, A.F., Monesi, N., Nascimento, A.M., Peixotto, P.M.V., Silva, M.F.R., Ramos, R.G.P., Reis, L.F.L, Dias Neto, E., Souza, S.J., Simpson, A.J.G., Zago, M.A., Soares, A.E.E., Bitondi, M.M.G., Espreafico, E.M., Espinola, F.S., Paco-Larson, M.L., Simoes, Z.L.P., Hartfelder, K. and
                                                                                                                                                                                                                                                                                                                                 This sequence was derived from t
High quality sequence start: 66
High quality sequence stop: 625.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CK629396 872 bp mRNA linear AMO-AA0013-110902-011-H03 AA0013 Apis mellifera cD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Apis mellifera (honey bee)
Apis mellifera
                                                                                                                                                                                         /organism="Apis mellifera"
/mol_type="mRNA"
/strain="Africanized"
/db_xref="taxon:7460"
                                                                                                           /sex="female, worker"
/dev_stage="adult"
/clone_lib="AA0013"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
Endopterygota; Hymenoptera; Apocrita; Aculeata; Apoidea;
  Score 437.2;
                                                                                 whole body"
                                                                                                                                                                                                                                                                                                                                                                                                                     the
                                                                                                                                                                                                                                                                                                                                                                                                                        FAPESP
  B
  7;
                                                                                                                                                                                                                                                                                                                                                                                                                     Genome Program
Length 872;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Brazil
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CDNA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  for analysis of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EST 26-MAR-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              mRNA
```

```
RESULT 2
BQ474958/c
LOCUS
                                                   COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                  REFERENCE
                                                                                                                                                                                                                                                     KEYWORDS
                                                                                                                                                                                                                                                                   VERSION
                                                                                                                                                                                                                                                                                 ACCESSION
                                                                                                                                                                                                                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Loc
Matches
                                                                               JOURNAL
MEDLINE
                                                                                                                        TITLE
                                                                                                                                                                                                                         ORGANISM
                                                                                                                                                    AUTHORS
                                                                   PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity
22217875
12230545
Contact: Foster PG
Vogler, Entomology
The Natural History Muse
Cromwell Road, London, S
                                                                                                                                                                                                                                                                                                                                                                                                                        671
                                                                                                                                                                                                                                                                                                                                                                                                                                                    213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              611
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              453
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     513
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            573
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               197
                                                                                                                                                                                                                                                                                                                                                                                             153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 752
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             77
                                                                                                                                                                                                                                                  carabus4912.b Carabus granulatus
carabus4912 5', mRNA sequence.
BQ474958
BQ474958.1 GI:25957232
EST.
                                                                                                                                                                           Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
Neoptera; Endopterygota; Coleoptera; Adephaga; Carabidae; Carabini;
Carabina; Carabus; Carabus.
                                                                                                                                                                                                                      Carabus granulatus
                                                                                           Comparison of EST libraries from seven beetle framework for phylogenomics of the Coleoptera Insect Mol. Biol. 11 (5), 467-475 (2003)
                                                                                                                                    Vogler, A.P.
                                                                                                                                                 Theodorides, K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCTACATCTTCACAAGTTATGATATAGACTGGGTGAGGCAGACGCCTGAACAGGGACTTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GCAAGGCCACATTGACTGTAGACAAGTCCTCCAGCACAGCCTACATGGAGCTCCGCAGCC
                                                                                                                                                                                                                                                                                                                                                                                                             GTTACCCGCTCACGTTCGGTGCTGGGACACAGTTGGAAATAAAACGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCACAATCAGCAGCATGGAGGCTGTAGATGCTGCCACTTATTACTGCCATCAGCGGAGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACGTGGCTCCTGGAGTCCCTTTTCGCTTCAGTGGCAGTGGGTCTGGGACCTCTTATTCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AACTGGCTTCTGGAGTCCCTGCTCGCTTCAGTGGCAGTGGGTCTGGGACCTCTTATTCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TATATTGGTACCAACAGAAGCCTGGATCCTCCCCCAGACTCCTGATTTATGACACATCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGCACTGGTACCAGCAGAAGCCTGTCACCTCCCCCAAAAGATGGATTTATGACACATCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGGCAGCTCAAGTATAAGTTACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GAGGTGGCTCTGGCGGTGGCGATCTGACATTGAGCTCACCCAGTCTCCAGCAATCATGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TTGCTTACTGGGTCCAAGGGACCACCGTCACCGTCTCAGGTGGAGGCGGTTCAGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGACATCTGAGGATTCTGCAGTCTATTACTGTGCAAGAG-----ATACTACGGTCCCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCAGGCCCACACTGAGTGTAGACAAGTCCTCCAGCACAGCCTATATGGAGCTCACTAGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGTGGATTGGATGGTTTT-TCCTGGAGAGGGGGAGTACTGAATACAATGAGAAGTTCAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GANACAAATTCACTGAATACACCATGCACTGGGTGAAGCAGAGCCATGGAAAGAGCCTTG
                                                                                                                                                                                                                                                                                                                                                                                            ĠŦŦĀŦĊĊĠŦĀĊĀĊĠŦŦĊĠĠĀĠĠĠĠĠĠĠĊĊĀĀĠĊŦĠĠĀĠĊŦĠĀĀĀĊĠĠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCACAATCAACCGAATGGAGGCTGAGGATGCTGCCACTTATTACTGCCAGGAGTGGAGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTGCATCTCCAGGGGAGAGGGTCACCATGACCTGCAGTGCCAGCTCAAGTATACGTTACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TTGACTTGTGGGNCCAAGGGACCACGGTCACCGTCTCCTCATGTGGAGNCGGTTCAGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGACATCTGAGGACTCTGCTGTCTATTTCTGTGCTAGAGGGGACTACTATAGGCGCTACT
                                                                                                                                                                (bases 1 to 601)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   81.8%;
                                                                                                                                               de Riva, A.,
          Museum
on, SW7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pred. No. 7.4e-118;
0; Mismatches 111;
                                                                                                                                                                                                                                                                                                                       601
          5BD
                                                                                                                                               Gomez-Zurita,J.,
                                                                                                                                                                                                                                                                                                                     đđ
                                                                                                                                                                                                                                                                                                        mRNA lir
cDNA Carabus
                                                                                                                                                                                                                                                                                                                       linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                  Foster, P.G.
                                                                                                                                                                                                                                                                                                     inear EST 3.
3 granulatus (
                                                                                                                     species:
                                                                                                                                                                                                                                                                                                                                                                                            107
                                                                                                                                                                                                                                                                                                                                                                                                                      717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    7;
                                                                                                                      towards
                                                                                                                                                                                                                                                                                                                     30-NOV-2002
                                                                                                                                                                                                                                                                                                          cDNA clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              670
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  490
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 574
                                                                                                                                                                                                                                                                                                                                                                                                                                                  154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       430
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             256
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         634
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               693
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ν
                                   REFERENCE
AUTHORS
                                                                                                      SOURCE
ORGANISM
                                                                                                                                                                                                      RESULT 3
CK629846/c
LOCUS
                                                                                                                                                 ACCESSION
VERSION
                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                       ğ
                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                               멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           뭥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                    KEYWORDS
                                                                                                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         source
                                                                                                                                                                                                                                                                                                                                                                                                                   542
                                                                                                                                                                                                                                                                                                                                                                                                                                               240
                                                                                                                                                                                                                                                                                                       662
                                                                                                                                                                                                                                                                                                                                    120
                                                                                                                                                                                                                                                                                                                                                              602
                                                                                                                                                                                                                                                                                                                                                                                          180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                501;
                                                                                                                                                                                                                                                                            60
    Apidae; Apis.

1 (bases 1 to 1104)

Nunes, F.M.F., Valente, V., Sousa, J.F.,
Maia, R.M., Araujo, D.D., Costa, M.C.R.,
Monesi, N., Nascimento, A.M., Peixoto, P.
                                                                          Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota; Neoptera; Endopterygota; Hymenoptera; Apocrita; Aculeata; Apo
                                                                                                      Apis mellifera (honey bee)
Apis mellifera
                                                                                                                                                             1104 bp
AM2-AA0023-091202-021-F02 AA0023
sequence
CK629846
                                                                                                                                                 CK629846.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Email: p.foster@nhm.ac.uk.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                         AGCGGAGTAGTTACCCCGCTCACGTTCGGTGCTGGGACACAGTTGGAAATAAAACGG
                                                                                                                                                                                                                                                                                                                                                   CTTATTCTCTCACAATCAGCAGCATGGAGGCTGTAGATGCTGCCACTTATTACTGCCATC
                                                                                                                                                                                                                                                                                                                                                                                                          ACACATCCAAACTGGCTTCTGGAGTCCCTGGCTCCAGTGGGAGTGGGTCTGGGACCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                  TACGTTACATATTGGTACCAACAGAAGCCTGGATCCTCCCCCAGACTCCTGATTTATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TAAGTTACATGCACTGGTACCAGCAGAAGCCTGTCACCTCCCCCCAAAAGATGGATTTATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGGCAGCTCAAGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGGGCTACTTTGACTTGTGGGGCCAAGGGACCACGGTCACCGTCTCCTCATGTGGAGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CGGTCCCGTTTGCTTACTGGGTCCAAGGGACCACGGTCACCGTCTCCTCAGGTGGAGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TCCGCAGCCTGACATCTGAGGATTCTGCAGTCTATTACTGTGCAAGAG-----ATACTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGTTCAAGGGCAAGGCCACATTGACTGTAGACAAGTCCTCCAGCACAGCCTACATGGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGTGGAGTGGTTATCCGTACACGTTCGGAGGGGGGGACCAAGCTGGAGCTGAAACGG
                                                                                                                                                                                                                                                                                                                                    CTTATTCTCTCACAATCAACCGAATGGAGGCTGAGGATGCTGCCACTTATTACTGCCAGG
                                                                                                                                                                                                                                                                                                                                                                                          ACACATCCAACGTGGCTCCTGGAGTCCCTTTTCGCTTCAGTGGCAGTGGGTCTGGGACCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CAATCATGTCTGCATCTCCAGGGGAGAGGGTCACCATGACCTGCAGTGCCAGCTCAAGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GTTCAGGCGGAGGTGGCTCTGGCGGTGGCGGATCTGACATTGAGCTCACCCAGTCTCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCACTAGGCTGACATCTGAGGACTCTGCTGTCTATTTCTGTGCTAGAGGGGACTACTATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGTTCAAGGGCAGGGCCACACTGAGTGTAGACAAGTCCTCCAGCACAGCCTATATGGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGGGACTTGAGTGGATTGGATGTTTTTCCTGGAGAGGGGGAGTACTGAATACAATGAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1. .601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /clone_lib="Carabus granulatus
/note="Vector: pUC18"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /mol_type="mRNA"
/db_xref="taxon:118799"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          organism="Carabus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  clone="carabus4g12"
                                                                                                                                                 GI:45754321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 431.6; DB
Pred. No. 3e-116;
0; Mismatches 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        granulatus"
                                                                                                                                                                                          Apis
                                                                                                                                                                                                       mRNA
       Cunha, M.A.V.,
Martins, W.K.,
P.M.V., Silva, M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; 68
                                                                                                                                                                                           mellifera
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CDNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                       linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
                                                                                                                                                                                          CDNA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            601;
     , Pinheiro,D.O, Carvalho,A., M.F.R.,
                                                                                                                                                                                                       EST 26-MAR-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                6,
                                                                                                                                                                                           mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                            Apoidea;
                                                                                                                                                                                                                                                                            v
                                                                                                                                                                                                                                                                                                        717
                    , D.G.
```

661 121

61

```
JOURNAL COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
                                                                                                       540
                                                                                                                                         327
                                                                                                                                                                           480
                                                                                                                                                                                                               387
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   687
207
                                600
                                                                     267
                                                                                                                                                                                                                                                  420
                                                                                                                                                                                                                                                                                    447
                                                                                                                                                                                                                                                                                                                        360
                                                                                                                                                                                                                                                                                                                                                              507
                                                                                                                                                                                                                                                                                                                                                                                                300
                                                                                                                                                                                                                                                                                                                                                                                                                                   567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        747
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                534;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ramós,R.G.P., Reis,L.F.L, Dias Neto,E., Souza,S.J., Simpson,A.J.G., Zago,M.A., Soares,A.E.E., Bitondi,M.M.G., Espreafico,E.M., Espindola,F.S., Paco-Larson,M.L., Simoes,Z.L.P., Hartfelder,K. and Silva,W.A. Jr.
Open reading frame ESTs - an efficient strategy for analysis of the honey bee transcriptome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Contact: Silva Jr, W. A.

Molecular Genetic and Bioinformatics Laboratory
Departament of Genetics, FMRP/ISP, FUNDHERP
Rua Tenente Catao Roxo, 2501, CEP 14051-140, Bra
Tel: +55 16 39639309
Fax: +55 16 39639309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       honey bee transcriptome 
Unpublished (2004)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Email: wilsonjr@usp.br
                CTCTTATTCTCTCACAATCAGCAGCATGGAGGCTGTAGATGCTGCCACTTATTACTGCCA 659
                                                                                        TGACACATCCAAACTGGCTTCTGGAGTCCCCTGCTCCAGTGGCAGTGGGTCTGGGAC
                                                                                                                                                                TATAAGTTACATGCACTGGTACCAGCAGAAGCCTGTCACCTCCCCCCAAAAGATGGATTTA
                                                                                                                                                                                                                                                                                                           TACGGTCCCGTTTGCTTACTGGGTCCAAGGGACCACGGTCACCGTCTCCTCAGGTGGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAGTTCAAGGGCAAGGCCACATTGACTGTAGACAAGTCCTCCAGCACAGCCTACATGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGACTTCTGGANACAAATTCACTGAATACACCATGCACTGGGTGAAGCAGAGCCATGGA- 126
                                                                                                                                           TATACGTTACATATATTGGTACCAACAGAAGCCTGGATCCTCCCCCAGACTCCTGATTTA
                                                                                                                                                                                                               AGCAATCATGTCTGCATCTCCAGGGGAGAGGGGTCACCATGACCTGCAGTGCCAGCTCAAG
                                                                                                                                                                                                                                   AGCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGGCAGCTCAAG
                                                                                                                                                                                                                                                                                      CGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCGGATCTGACATTGAGCTCACCCAGTCTCC
                                                                                                                                                                                                                                                                                                                                                              AGGCGCTACTTTGACTTGTGGGGGCCAAGGGACCACGGTCACCGTCTCCTCATGTGGAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAGGGACTTGAGTGGATTGGATTTTTTCCTGGAGAGGGGAGTACTGAATACAATGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGGCTTCTTGCTACATCTTCACAAGTTATGATATAGACTGGTTGAGGCAGACGCCTGAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                   CTCACTAGGCTGACATCTGAGGACTCTGCTGTCTATTTCTGTGCTAGAGGGGACTACTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTCCGCAGCCTGACATCTGAGGATTCTGCAGTCTATTACTGTGCAAGAG-----ATAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAGTTCAAGGGCAGGCCAACACTGAGTGTAGACAAGTCCTCCAGCACAGCCTATATGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 sequence was derived from the quality sequence start: 64 quality sequence stop: 594.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /mol_type="mRNA"
/strain="Africanized"
/db_xref="taxon:7460"
/dex="female, worker"
/dev_stage="adult"
/clone_lib="AA0023"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   'note="Organ: whole body"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               organism="Apis mellifera"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             59.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 426.6; DB 7;
Pred. No. 1.1e-114;
0; Mismatches 115;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CEP 14051-140, Brazil
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FAPESP Genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                          419
                                                                                                                                                                                                                                                                                                                                                              448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        889
                                                                                                       599
                                                                                                                                           268
                                                                                                                                                                                                               328
                                                                                                                                                                                                                                                  479
                                                                                                                                                                                                                                                                                      388
                                                                                                                                                                                                                                                                                                                                                                                                359
                                                                                                                                                                                                                                                                                                                                                                                                                                     508
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       299
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    186
                                                                   208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   628
                                밁
                                                              8
                                                                                                       밁
                                                                                                                                8
                                                                                                                                                                           밁
                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                 á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ð
```

ş

당 S

ई 밁

ঠ 밁 Ş 8 S 밁 ঠ 밁 ક В ş 밁

밁 δ 밁

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 4
CK629415/c
LOCUS
DEFINITION
                     ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCESSION
                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                source
                                                                                                                                                                                                                                                                                                                                                                                    Local
                         342
                                                                                                                                                                                                              645
                                                                                                                                                                                                                                                                                                                                                               510;
                                                                                                                                                                          228
                                                                                                                                                                                                                                                   168
                                                                                                                                                                                                                                                                                                                            108
                                                                                                                                                                                                                                                                                      703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              099
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Contact: Silva Jr, W. A.

Contact: Silva Jr, W. A.

Molecular Genetic and Bioinformatics Laboratory
Departament of Genetics, FMRP/USP, FUNDHERP
Rua Tenente Catao Roxo, 2501, CEP 14051-140, Bra
Tel: +55 16 39639309

Fax: +55 16 39639309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Nunes, F.M.F., Valente, V., Sousa, J.F., Cunha, M.A.V., Pinheiro, D.G., Maria, R.M., Araujo, D.D., Costa, M.C.R., Martins, M.K., Carvalho, A.F., Monesi, N., Nascimento, A.M., Peixoto, P.M.V., Silva, M.F.R., Ramos, R.G., P., Reis, L.F.L., Dias Neto, E., Souza, S.J., Simpson, A.J.G., Zago, M.A., Soares, A.E.E., Bitondi, M.M.G., Espreafico, E.M., Espindola, F.S., Paco-Larson, M.L., Simoes, Z.L.P., Hartfelder, K. and Silva wa. T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CK629415 1419 bp mRNA lines AM1-AA0014-041102-021-H09 AA0014 Apis mellifera
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Unpublished (2004)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Apis mellifera
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Email: wilsonjr@usp.br
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Open reading frame ESTs -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Silva, W.A. Jr.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Apidae; Apis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Neoptera; Endopterygota;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Apis mellifera (honey bee)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CK629415.1
                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                 TGGTACTACTACAAGCAGAAGTTCAAGGGCAAGGCCACATTGACTGTAGACAAGTCCTC
                                                                                                                                                                                                                                                                                                          GGTGAAGCAGAGCCATGGAAAGAGCCTTGAGTGGATTGGAGGTATTAATCCTAACAATGG 167
                                                                                                                                                                CAGCACAGCCTACATGGAGCTCCGCAGCCTGACATCTGAGGATTCTGCAGTCTATTACTG
                                                                                                                                                                                                              ANGTACTGAATACAATGAGAAGTTCAAGGGCAGGCACACACTGAGTGTAGACAAGTCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCAGCGGAGTAGTTACCCGCTCACGTTCGGTGCTGGGACACAGTTGGAAATAAAACGG
CGTCTCCTCAGGTGGAGGCGGTTCAGGCGGAGGTGGCTGTGGCGGTTGGCGGATCGGACAT
                                                                                                                                                                                                                                                                                      GGTGAAGCAGACGCCTGNACAG-GACTTGAGTGGATTGGATG-ATTTTTCCTGGAGAGGG
                                                            TGCTAGAGGGGGACTACTATAGGCGCCTACTTTGACTTGTGGGGGCCAAGGGACCACGGTCAC
                                                                                              TGCAAGAG-----ATACTACGGTCCCGTTTGCTTACTGGGTCCAAGGGACCACGGTCAC
                                                                                                                                     CAGCACAGCCTATATGGAGCTCACTAGGCTGACATCTGAGGACTCTGCTGTCTATTTCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGAGTGGAGTGGTTATCCGTACACGTTCGGAG-GGGGACCAAGCTGGAGCTGAAACGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (равев
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       sequence was derived from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                quality sequence start: 63 quality sequence stop: 605. Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                         /dev_stage="adult"
/clone_lib="AA0014"
/note="Organ: whole body"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 to 1419)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       mol_type="mRNA"
|strain="Africanized"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           organism="Apis mellifera"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      db_xref="taxon:7460"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    sex="female, worker"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Metazoa; Arthropoda; Hexapoda; Insecta;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GI:45753890
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .1419
                                                                                                                                                                                                                                                                                                                                                                                  57.9%;
82.9%;
                                                                                                                                                                                                                                                                                                                                                                 <u>.</u>
                                                                                                                                                                                                                                                                                                                                                               Score 415; DB 7;
Pred. No. 3.2e-111;
0; Mismatches 97;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Hymenoptera;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              efficient strategy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FAPESP
                                                                                                                                                                                                                                                                                                                                                                 97;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Apocrita;
                                                                                                                                                                                                                                                                                                                                                                                                    Length 1419;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Genome
                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ta; Pterygota;
Aculeata; Apo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CDNA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 for analysis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Program
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EST 26-MAR-2004
                                                                                                                                                                                                                                                                                                                                                               8,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             mRNA
                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Apoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                717
                         401
                                                                                                                                                                      287
                                                          466
                                                                                                341
                                                                                                                                     526
                                                                                                                                                                                                              586
                                                                                                                                                                                                                                                 227
                                                                                                                                                                                                                                                                                      646
```

```
RESULT 5
CK629414/c
LOCUS
                                                                                                                                                                                                                                                                   JOURNAL COMMENT
                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
               ORIGIN
                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCESSION
                                                                                                                                                                                                                                                                                                         TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   642
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   582
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 702
                                                                                                                                                                                                                                                                                                                                                                                                                                          Apis mellifera
Apis mellifera
Eukaryota; Meta
                                                                                                                                                                                                                                                                                                              1 (bases 1 to 1339)

Nunes, F. M.F., Valente, V., Sousa, J.F., Cunha, M.A.V., Pinheiro, D.G., Maia, R.M., Araujo, D.D., Costa, M.C.R., Martins, W.K., Carvalho, A.F., Monesi, N., Nascimento, A.M., Peixoto, P.M.V., Silva, M.F.R., Ramos, R.G.P., Reis, L.F.L., Dias Neto, B., Souza, S.J., Simpson, A.J.G., Zago, M.A., Soares, A.E.E., Bitondi, M.M.G., Espreafico, E.M., Espindola, F.S., Paco-Larson, M.L., Simoes, Z.L.P., Hartfelder, K. and Silva, W.A., Jr.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               sequence.
CK629414
CK629414.1
EST.
                                                                                                                                                                                                   Contact: Silva Jr, W. A.

Molecular Genetic and Bioinformatics Laboratory
Departament of Genetics, FMRP/USP, FUNDHERP
Rua Tenente Catao Roxo, 2501, CEP 14051-140, Bro
Tel: +55 16 39639300

Fax: +55 16 39639309
                                                                                                                                                                                                                                                                                            Open i
                                                                                                                                                                                         Fax: +55 16 39639309
Email: wilsonjr@usp.br
                                                                                                                                                                                                                                                                              Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                  Apidae; Apis.
                                                                                                                                                                                                                                                                                                                                                                                                                               Neoptera;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CK629414 1339 bp mRNA linear E.
AM1-AA0014-041102-021-D05 AA0014 Apis mellifera cDNA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGCCACTTATTACTGCCATCAGCGGAGTAGTTACCCCGCTCACGTTCGGTGCTGGGACACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TGGCAGTGGGTCTGGGACCTCTTATTCTCTCACAATCAGCAGCATGGAGGCTGTAGATGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCCCAAAAGATGGATTTATGACACATCCAAACTGGCTTCTGGAGTCCCTGCTCGCTTCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTGCAGTGCCAGCTCAAGTATACGTTACATATATTGGTACCAACAGAAGCCTGGATCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTGCAGTGGCAGCTCAAGTATAAGTTTACATGCACTGGTACCAGCAGAAAGCCTGTCACCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GTTGGAAATAAAACG 716
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TGCCACTTATTACTGCCAGGAGTGGAGTGCTTATCCGTACACGTTCGGAGGGGGGACCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TGGCAGTGGGTCTGGGACCTCTTATTCTCTCACAATCAACCGAATGGAGGCTGAGGATGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCCCAGACTCCTGATTTATGACACATCCAACGTGGCTCCTGGAGTCCCTTTTCGCTTCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CGTCTCCTCATGTGGAGACGGTTCAGGCGGAGGTGGCTCTGTCGGTGGCGGATCTGACAT
                                                                                                                                                   quality sequence start: 62 quality sequence stop: 662
                                                                                                                                                                           sequence was derived
                                                                                                                                                                                                                                                                                                       reading frame ESTs
                                                                                                                                                                                                                                                                                        bee transcriptome
                           /note="Organ:
                                     /sex="female, worker"
/dev_stage="adult"
/clone_lib="AA0014"
                                                                                                                                                                                                                                                                                                                                                                                                                              ; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota; Endopterygota; Hymenoptera; Apocrita; Aculeata; Apo
                                                                            B
                                                                                    mol_type="mRNA"
/strain="Africanized"
                                                                                                              organism="Apis mellifera"/
                                                                                                                                       ocation/Qualifiers
                                                                                                                                                                                                                                                                                (2004)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GI:45753889
                                                                           _xref="taxon:7460"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (honey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     bee)
                           whole body"
                                                                                                                                                                 l from 1
                                                                                                                                                                                                                                                                                                      an
                                                                                                                                                                                                                                                                                                     efficient
                                                                                                                                                                           the
                                                                                                                                                                             FAPESP
                                                                                                                                                                                                                                                                                                     strategy
                                                                                                                                                                           Genome
                                                                                                                                                                                                                             Brazil
                                                                                                                                                                                                                                                                                                      for
                                                                                                                                                                           Program
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EST
                                                                                                                                                                                                                                                                                                      analysis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             26-MAR-2004
                                                                                                                                                                                                                                                                                                                                                                                                                              Apoidea;
                                                                                                                                                                                                                                                                                                      얁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          226
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  581
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            346
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            406
                                                                                                                                                                                       ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                            RESULT 6
CK633068
                                                                                                                                                                                                                                                                                                                                                                                               5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                             맑
                                                                                                                                                                                                                                                                                                                                                  ş
                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ঠ
                                                                                                                          REFERENCE
                                                                                                                                                                                                                                                    DEFINITION
                                                                                                                                                                                                                                                                 Locus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local S
Matches 514
                        TITLE
                                                                                                              AUTHORS
                                                                                                                                                                           ORGANISM
 JOURNAL
                                                                                                                                                                                                                                                                                                                                                                              175
                                                                                                                                                                                                                                                                                                                             115
                                                                                                                                                                                                                                                                                                                                                     692
                                                                                                                                                                                                                                                                                                                                                                                                     632
                                                                                                                                                                                                                                                                                                                                                                                                                               235
                                                                                                                                                                                                                                                                                                                                                                                                                                                       572
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      452
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                475
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       332
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  595
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    514;
                                       Open reading frame ESTs -
honey bee transcriptome
Unpublished (2004)
                                    Espindola, F.S., Paco-Larson, M.L., Silva, W.A. Jr.
                                                                                                                             Apidae; Apis.
1 (bases 1 +
                                                                                                                                                Apis mellifera
Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
Neoptera; Endopterygota; Hymenoptera; Apocrita; Aculeata; Apoidea;
                                                                                                                                                                                                    CK633068.1
EST.
                                                                                                                                                                                      Apis mellifera (honey bee)
                                                                                                                                                                                                                                                    AM3-AP0011-151201-021-A08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                GI:45757543
```

672 bp 8 AP0011

Apis mRNA

mellifera

CDNA,

TURNA

26-MAR-2004

linear

an

efficient strategy

for

analysis

of the

```
GGGGGACCAAGCTGGAGCTGAAACGG
                          CTGGGACACAGTTGGAAATAAAACGG
                                                                                                       CTGTAGATGCTGCCACTTATTACTGCCATCAGCGGAGTAGTTACCCGCTCACGTTCGGTG
                                                                                                                                                                    TTCGCTTCAGTGGCAGTGGGTCTGGGGACCTCTTATTCTCTCACAATCAACCGAATGGAGG
                                                                                                                                                                                              CTCGCTTCAGTGGCAGTGGGTCTGGGACCTCTTATTCTCTCACAATCAGCAGCATGGAGG
                                                                                                                                                                                                                                                                                CTGTCACCTCCCCCAAAAGATGGATTTATGACACATCCAAACTGGCTTCTGGAGTCCCTG
                                                                                                                                                                                                                                                                                                                                    TCACCATGACCTGCAGTGCCAGCTCAAGTATACGTTACATATATTGGTACCAACAGAAGC
                                                                                                                                                                                                                                                                                                                                                             TCACCATGACCTGCAGTGGCAGCTCAAGTATAAGTTACATGCACTGGTACCAGCAGAAGC
                                                                                                                                                                                                                                                                                                                                                                                                                        GATCTGACATTGAGCTCACCCAGTCTCCAGCAATCATGTCTGCATCTCCAGGGGAGAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                GATCGGACATCGAGCTCACTCAGTCTCCAGCAATCATGTCTGCATCTCCAGGGGAGAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCACGGTCACCGTCTCATGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CCACGGTCACCGTCTCCTCAGGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCTATTACTGTGCAAGAG-----ATACTACGGTCCCGTTTGCTTACTGGGTCCAAGGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACAAGTCCTCCAGCACAGCCTACATGGAGCTCCGCAGCCTGACATCTGAGGATTCTGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TAACAATGGTGGTACTAACTACAAGCAGAAGTTCAAGGGCAAGGCCACATTGACT-GTAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATGCACTGGGTGAAGCAGAGCCATGGAAAGAGCCTTGAGTGGATTGG-AGGTATTAATCC
                                                                                   CTGGATCCTCCCCAGACTCCTGATTTATGACACATCCAACGTGGCTCCTGGAGTCCCTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACAAGTCCTCCAGCACAGCCTATATGGAGCTCACTAGGCTGACATCTGAGGACTCTGCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGGAGAGGGGAGTACTGAATACAATGAGAAGTTCAAGGGCAGGGCCACACTGAGTGGTAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATAGCCTCGGTGAGCAGAACGCCTGAACAGGACCTTGAGTGGACTGGAATCGATTTTTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          57.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 413.6; DB 7;
Pred. No. 8.2e-111;
0; Mismatches 104;
90
                                       717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                             571
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            476
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            158
                                                                                                                        691
                                                                                                                                                                    176
                                                                                                                                                                                                              631
                                                                                                                                                                                                                                                                                                                                       296
                                                                                                                                                                                                                                                                                                                                                                            511
                                                                                                                                                                                                                                                                                                                                                                                                                      356
                                                                                                                                                                                                                                                                                                                                                                                                                                                               451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    331
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       277
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 596
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  656
                                                                                                                                                                                                                                                     236
```

Ç,

Apoidea;

of the

```
RESULT 7
CK633069
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORIGIN
  ACCESSION
                                                        DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                             557
                                                                                                                                                                                                                                                                                                                                                                                                     471
                                                                                                                                                                                                                                                                                                                                                                                                                                                       497
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  197
                                                                                                                                                                                                                             617
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          480;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                77
sequence.
CK633069
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Contact: Silva Jr, W. A.
Molécular Genetic and Bioinformatics Laboratory
Departament of Genetics, FMRP/USP, FUNDHERP
Rua Tenente Catao Roxo, 2501, CEP 14051-140, Brazil
Tel: +55 16 39639300
Fax: +55 16 39639309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Fax: +55 16 39639309
Email: wilsonjr@usp.br
This sequence was deriv
                                                        CK633069 672 bp mRNA linear E. AM3-AP0011-070602-021-A08 AP0011 Apis mellifera cDNA,
                                                                                                                                                                                                                                                          ATGGATTTATGACACATCCAAACTGGCTTCTGGAGTCCCTGCTCGCTTCAGTGGC 585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CAGGTGAAACTGCAGCAGTCA-GGACCTGAACTGGTGNAGCC-TGGGGCTTCAGTGAAGA 58
                                                                                                                                                                                                                                                                                                                                                                           CAGCTCAAGTATAAGTTACATGCACTGGTACCAGCAGAAGCCTGTCACCTCCCCCAAAAG 530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATACAATGAGAAGTTCAAGGGCAGGGCCACACTGAGTGTAGACAAGTCCTCCAGCACAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CAGGTGAAGCTGCAGCAGTGAGGGAACAGAAGTGGTAAAAGCCGTGGGGCTTCAGCTGAAG 13 6
                                                                                                                                                                                                                             CCTGATTTATGACACATCCAACGTGGCTCCTGGAGTCCCATTTCGCTTCAGTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCAGTCTCCAGCAATCATGTCTGCATCTCCAGGGGAGAGGGGTCACCATGACCTGCAGTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCAGTCTCCAGCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGG 470
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCGGATCTGACATTGAGCTCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGGTGGAGGGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCGATCGGACATCGAGCTCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGACTACTATAGGCGCTACTTTGACTTGTGGGGCCAAGGGACCACGGTCACCGTCTCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ----ATACTACGGTCCCGTTTGCTTACTGGGTCCAAGGGACCACGGTCACCGTCTCCTC 350
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTATATGGAGCTCACTAGGCTGACATCTGAGGACTCTGCTGTCTATTTCTGTGCTAGAGG 376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTACATGGAGCTCCGCAGCCTGACATCTGAGGATTCTGCAGTCTATTACTGTGCAAGAG- 295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTACAAGCAGAAGTTCAAGGGCAAGGCCACATTGACTGTAGACAAGTCCTCCAGCACAGC 236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GACGCCTGAACAGGGACTTGAGTGGATTGGATTTTTTCCTGGAGAGGGGAGTACTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GAGCCATGGAAAGAGCCTTGAGTGGATTGGAGGTATTAATCCTAACAATGGTGGTACTAA 176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTGTCCGTGCAAGGCTTCTGGCTACATCTTCACAAGTTATGATATAGACTGGGTGAGGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   T--ATCCTGCAAGACTTCTGGANACAAATTCACTGAATACACCATGCACTGGGTGAAGCA 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       sequence was derived from t
quality sequence start: 100
quality sequence stop: 629
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /mol_type="mRNA"
/strain="Africanized"
/db_xref="taxon:7460"
/sex="female, worker"
/dev_stage="pupal"
/clone_lib="AP0011"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               note="Organ: whole body"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       organism="Apis mellifera"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    51.4%;
80.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 368.2; DB 7; Length Pred. No. 1.9e-97; Mismatches 105; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             from the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FAPESP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     672;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             10;
                                                                                     EST 26-MAR-2004
                                                           mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                          556
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     316
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     256
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                410
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
AUTHORS
                                            문
                                                                                                          Ś
                                                                                                                                                                           밁
                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches 480;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       117
                                                                                                                                                                           377
                                                                                                                                                                                                                                                                                     317
                                                                                                                                                                                                                                                                                                                                                                                                                                                             177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  137
                                                        437
                                                                                                                351
                                                                                                                                                                                                                                   296
                                                                                                                                                                                                                                                                                                                                             237
                                                                                                                                                                                                                                                                                                                                                                                                     257
     411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Unpublished (***).
Contact: Silva Jr, W. A.
Contact: Silva Jr, W. A.
Molecular Genetic and Bioinformatics Laboratory
Departament of Genetics, FMRP/USP, FUNDHERP
Departament of Genetics, 5MRP/USP, 5MRP/USP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          High
High
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Nunes, F.M. F., Valente, V., Sousa, J.F., Cunha, M.A.V., Pinheiro, D.G., Maria, R.M., Araujo, D.D., Costa, M.C.R., Martins, W.K., Carvalho, A.F., Monesi, N., Nascimento, A.M., Peixotto, P.M.V., Silva, M.F.R., Ramos, R.G.P., Reiss, L.F.L., Dias Neto, E., Souza, S.J., Simpson, A.J.G., Zago, M.A., Soares, A.E.E., Bitondi, M.M.G., Espreafico, E.M., Espindola, F.S., Paco-Larson, M.L., Simoes, Z.L.P., Hartfelder, K. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Email: wilsonjr@usp.br
This sequence was derived from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Silva,W.A. Jr.
Open reading frame ESTs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
Neoptera; Endopterygota; Hymenoptera; Apocrita; Aculeata; Apo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Apis mellifera
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CK633069.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          honey bee transcriptome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Apidae; Apis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                           CTACAAGCAGAAGTTCAAGGGCAAGGCCACATTGACTGTAGACAAGTCCTCCAGCACAGC
     TCAGTCTCCAGCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGG
                                                                                           AGGTGGAGGCGGTTCAGGCGAGGTGGCTCTGGCGGTGGCGGATCGGACATCGAGCTCAC 410
                                                                                                                                                                                                                                                                                           CTATATGGAGCTCACTAGGCTGACATCTGAGGACTCTGCTGTCTATTTCTGTGCTAGAGG
                                                                                                                                                                                                                                                                                                                        CTACATGGAGCTCCGCAGCCTGACATCTGAGGATTCTGCAGTCTATTACTGTGCAAGAG-
                                                                                                                                                                                                                                                                                                                                                                                                     ATACAATGAGAAGTTCAAGGGCCAGGGCCACACTGAGTGTAGACAAGTCCTCCAGCACAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GACGCCTGAACAGGGACTTGAGTGGATTGGATGTTTTTCCTGGAGAGGGGAGTACTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CAGGTGAAGCTGCAGCAGTGAGGGAACAGAAGTGGTAAAGCCCGTGGGGGCTTCAGCTGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CAGGTGAAACTGCAGCAGTCA-GGACCTGAACTGGTGNAGCC-TGGGGCTTCAGTGAAGA 58
                                                                                                                                                                           GGACTACTATAGGCGCTACTTTGACTTGTGGGGCCAAGGGACCACGGTCACCGTCTCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GAGCCATGGAAAGAGCCTTGAGTGGATTGGAGGTATTAATCCTAACAATGGTGGTACTAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     T--ATCCTGCAAGACTTCTGGANACAAATTCACTGAATACACCATGCACTGGGTGAAGCA 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PTGTCCGTGCAAGGCTTCTGGCTACATCTTCACAAGTTATGATATAGACTGGGTGAGGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Tenente Catao Roxo,
: +55 16 39639300
:: +55 16 39639309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          quality sequence start: 100 quality sequence stop: 629.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                           ATACTACGGTCCCGTTTTGCTTACTGGGTCCAAGGGACCACGGTCACCGTCTCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /sex="female, worker"
/dev_stage="pupal"
/clone_lib="AP0011"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     db_xref="taxon:7460"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /mol_type="mRNA"
/strain="Africanized"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     'note="Organ: whole
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       organism="Apis mellifera"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GI:45757544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  51.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        672)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (honey bee)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 368.2; DB 7;
Pred. No. 1.9e-97;
0; Mismatches 105;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        efficient strategy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  14051-140, Brazil
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FAPESP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Genome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 672;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           for analysis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Program
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                10;
```

Gaps

136

436

350

376 295 256 176 196

236

밁 ঠ 밁 Ś 밁 S 밁 S

밁 5

δ 밁 S 밁 S 밁 δ В Ş

밁

```
REFERENCE
AUTHORS
                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 8
CK629843/c
                                                            Ş
                                                                                                                                                                     á
                                                                                                                                                                                                                               밁
           밁
                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Snoor
                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local S
Matches 460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        source
           525
                                                                                                                     585
                                                                                                                                                                           226
                                                                                                                                                                                                                               644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 497
                                                              285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 531
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           471
                                                                                                                                                                                                                                                                                                                                           460;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Contact: Silva Jr, W. A.

Molecular Genetic and Bioinformatics Laboratory
Departament of Genetics, FMRP/USP, FUNDHERP
Rua Tenente Catao Roxo, 2501, CEP 14051-140, Br
Tel: +55 16 39639300
Fax: +55 16 39639309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Nunes, F.M.F., Valente, V., Sousa, J.F., Cunha, M.A.V., Pinheiro, D.G., Maria, R.M., Araujo, D.D., Costa, M.C.R., Martins, W.K., Carvalho, A.F., Monesi, N., Nascimento, A.M., Peixotto, P.M.V., Silva, M.F.R., Ramos, R.G.P., Reis, L.F.L. Dias Neto, E., Souza, S.J., Simpson, A.J.G., Zago, M.A., Soares, A.E.E., Bitondi, M.M.G., Espreafico, E.M., Espindola, F.S., Paco-Larson, M.L., Simoes, Z.L.P., Hartfelder, K. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Email: wilsonjr@usp.br
This sequence was deriv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   honey bee transcriptome Unpublished (2004)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 neario (Reference de la Perezgota; Perezgota
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Apis mellifera
Apis mellifera
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CK629843.1
EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CK629843
AM2-AA0023-091202-021-H05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Open reading frame ESTs - an efficient strategy for analysis of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Silva, W.A. Jr.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 (bases 1 to 963)
Nunes, F.M.F., Valente, V.,
                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Apidae; Apis.
                                                                                                                                                    TCCAGCACAGCCTACATGGAGCTCCGCAGCCTGACATCTGAGGATTCTGCAGTCTA-TTA
                                                                                                                                                                                                                            GGGGATGCTGAGTACAATGAGAA-TTCAATGGCAGGGCCACACTGAGTGTAGACAAGTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATGGATTTATGACACATCCAAACTGGCTTCTGGAGTCCCTGCTCGCTTCAGTGGC
                                                            CTGTGCAAGAG-----ATACTACGGTCCCGTTTGCTTACTGGGTCCAAGGGACCAC-G
                                                                                                                  TCCAGCACAGCCTATATGGAGCTCACTAGGCTGACATCTGAGGACTCTGCTGTCTATTTG
                                                                                                                                                                                                                                                                          GGTGGTACTACCTACAAGCAGAAGTTCAAGGGCAAGGCCACATTGACTGTAGACAAGTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CAGCTCAAGTATAAGTTACATGCACTGGTACCAGCAGAAGCCTGTCACCTCCCCCAAAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCAGTCTCCAGCAATCATGTCTGCATCTCCAGGGGAGAGGGTCACCATGACCTGCAGTGC
           CTGTGCTAGAGGGGACTACTATAGGCGCTACTTTGACTTGTGGGGGCTCAAGGGACCACGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CAGCTCAAGTATACGTTACATATTTGGTACCAACAGAAGCCTTGGATCCTCCCCCAGACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               sequence was derived from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      quality sequence start: 88 quality sequence stop: 376.
                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   organism="Apis mellifera"
/mol_type="mRNA"
/strain="Africanized"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note="Organ: whole body"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /sex="female, worker"
/dev_stage="adult"
/clone_lib="AA0023"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      db_xref="taxon:7460"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GI:45754318
                                                                                                                                                                                                                                                                                                                                                               48.1%;
82.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (honey bee)
                                                                                                                                                                                                                                                                                                                                      Score 344.6; DB Pred. No. 2e-90; 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             963 bp
5 AA0023
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Apis mellifera cDNA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FAPESP
                                                                                                                                                                                                                                                                                                                                                                                         DB 7;
                                                                                                                                                                                                                                                                                                                                         89;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Genome Program
                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                            Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Brazil
                                                                                                                                                                                                                                                                                                                                         12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EST 26-MAR-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          671
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Apoidea;
                                                            336
                                                                                                                  526
                                                                                                                                                                     284
                                                                                                                                                                                                                            586
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 556
           466
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 9
CK632348
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE
                                                                                                                                                                                                  source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             697
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       637
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    577
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 517
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       345 ÁTGACCTGCAGTGCCÁGCTCAÁGTATÁCGTTÁCATATATTGGTACCAACAGAAGCCTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          457
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Nunes, F.M.F., Valente, V., Sousa, J.F., Cunha, M.A.V., Pinheiro, D.G., Maia, R.M., Araujo, D.D., Costa, M.C.R., Martins, W.K., Carvalho, A.F., Monesi, N., Nascimento, A.M., Peixoto, P.M.V., Silva, M.F.R., Ramos, R.G.P., Reis, L.F.L., Dias Neto, E., Souza, S.J., Simpson, A.J.G., Zago, M.A., Soares, A.E.E., Bitondi, M.M.G., Espraefico, E.M., Espindola, F.S., Paco-Larson, M.L., Simoes, Z.L.P., Hartfelder, K. and Silva, W.A. Jr.
                                                                                                                                                                                                                                                                                                                                                          honey bee transcriptome
Inpublished (2004)
Contact: Silva Jr. W. A.
Contact: Silva Jr. W. A.
Molecular Genetic and Bioinformatics Laboratory
Molecular Genetics, FMRP/USP, FUNDHERP
Departament of Genetics, FMRP/USP, FUNDHERP
Rua Tenente Catao Roxo, 2501, CEP 14051-140, Bra
Tel: +55 16 39639309
Fax: +55 16 39639309
                                                                                                                                                                                                                   Email: wilsonjr@usp.br
This sequence was derived from the
High quality sequence start: 70
High quality sequence stop: 545.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      sequence.
CK632348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Apis mellifera (honey Apis mellifera
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Open reading frame ESTs -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
Neoptera; Endopterygota; Hymenoptera; Apocrita; Aculeata; Apo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CK632348 823 bp mRNA linear E: AM0-AM0009-070103-021-H02 AM0009 Apis mellifera cDNA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Apidae; Apis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CK632348.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GTCACCGTCTCCTCATGTGGAGTCGGTTCAGGCAGAGGTGGCTCTGGCGGTGGCGGATCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACACAGTTGGAAATAAAACGG 717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TTCAGTGGCAGTGGGTCTGGGACCTCTTATTCTCTCACAATCAACCGAAGGGAGGCTGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TCCTCCCCAGACTCCTGATGTATGACACATCCAACGTGGCTCCTTGGAGTCCCTTTTCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GTCACCGTCTCCTCAGGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCGGATCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCAAGCTGGAGCTGAAACGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GATGCTGCCACTTATTACTGCCAGGAGTGGAGTGGTTATCCGTACACTTCGGAGG--GGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GATGCTGCCACTTATTACTGCCATCAGCGGAGTAGTTACCCGCTCACGTTCGGTGCTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TTCAGTGGCAGTGGGTCTGGGACCTCTTATTCTCTCACAATCAGCAGCATGGAGGCTGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCTCCCCAAAAGATGGATTTATGACACATCCAAACTGGCTTCTGGAGTCCCTGCTCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATGACCTGCAGTGGCAGCTCAAGTATAAGTTACATGCACTGGTACCAGCAGAAGCCTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GACATTGAGCTCACCCAGTCTCCAGCAATCATGTCTGCATCTCCAGGGGAGAGGGTCACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GACATCGAGCTCACTCAGTCTCCAGCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACC
                                                                             /organism="Apis mellifera"
/mol type="mRNA"
/strain="Africanized"
/db_xref="taxon:7460"
/sex="female, worker"
/dev_stage="Mix of adult,
/clone_lib="AM0009"
                                                                                                                                                                                                     1. .823
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GI:45756823
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   bee)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         efficient strategy
                               pupal,
                                                                                                                                                                                                                                                                                                               FAPESP
                                                                                                                                                                                                                                                                                                               Genome
```

mRNA

Apoidea;

26-MAR-2004

696 166 636 576 286 516 346 456 406

226

larval

and

for

analysis of the

Tue 1

```
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                             RESULT 10
BQ328142/c
LOCUS
                                                                                                                                      REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                           DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                               ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local S
Matches 489
 JOURNAL
                                  TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                  593
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      642
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     533
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       582
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           473
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           522
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    402
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 162
                                                                                                                                                                                                                                                                                                                                                                                                  694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    102
                                                                                                                                                                                                                                       56
MR4-TR0048-210201-003-e06 R
BQ328142
BQ328142.1 GI:20946291
EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      489;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61
                          Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 567)

Dias Neto, E., Garcia Correa, R., Verjovski-Almeida, S., Briones, M.R., Nagai, M.A., da Silva, W. Jr., Zago, M.A., Bordin, S., Costa, F.F., Goldman, G.H., Carvalho, A.F., Matsukuma, A., Baia, G.S., Simpson, D.H., Brunstein, A., deOliveira, P.S., Bucher, P., Jongeneel, C.V., O'Hare, M.J., Soares, F., Brentani, R.R., Reis, L.F., de Souza, S.J. and Simpson, A.J.

Shotgun sequencing of the human transcriptome with ORF expressed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -
sequence tags
Proc. Natl. A
                                                                                                                                                                                                         Homo sapiens
                                                                                                                                                                                                                         Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TOTGGACCTCTTATTCTCTCAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GAAGGCGGTTCAGGCGAGGTGGCCTCTGGCGGTGGCGATCTGACATTGAGCTCACCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TACTATAGGCGCTACTTGACTTGTGGGGCCAAGGGACCACGGTCACCGTCTCCTCATGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATGGAGCTCCGCAGCCTGACATCTGAGGGATTCTGCAGTCTATTACTGTGCAAGAG-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAGCAGAAGTTCAAGGGCAAGGCCACATTGACTGTAGACAAGTCCTCCAGCACAGCCTAC 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TCCTGCAAGACTTCTGGANACAAATTCACTGAATACACCATGCACTGGGTGAAGCAGAGC 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CAGGTGAAGCTGCAGCAGTAAGGAACTGAAGTGGTAAAGCCTTGGGGCTTTCAGTGAAGTTG 161
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CAGGTGAAACTGCAGCAGTCAGGACCTGAACTGGTGNAGCCTGGGGGCTTCAGTGAAGATA 60
                                                                                                                                                                                                                                                                                                                                                                                                                      CTGGGACCTCTTATTCTCTCACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGATTTATGACACATCCAAACTGGCTTCTGGAGTCCCTGCTCGCTTCAGTGGCAGTGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GÜTCAAGTATACGTNACATATATTGGTTCCAACAGAAGCCTGGATCCTCCCCCAGACTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGTCAAGTATAAGTTACATGCACTGGTACCAGCAGAAGCCTGTCACCTCCCCCCAAAAGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CCTGAACAGGAACTTGAGTGGCTTGGATGGATTTTTCCTGGAGAGGGGGAGTACTGAATAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCCTGCAGAGCTTCTGGCTACATCTTCACAAGTTATGATATAGACTGGGTGAGGCAGACG 221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TGA-TTATGACACATC--AACGTGGCCCTGGAGTCCTTTCGC---TCAGTGGCAGTGG--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCTCCAGCAATCATGTCTGCATCTCCAGTGGAAGAGGGGTCACCAATGACCTGCAGTGCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TCTCCAGCAATCATGTCTGCATCTCCAGGGGAGAAGG--TCACCATGACCTGCAGTGGCA 472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATGGAGCTCACTAGGCTGACATCTGAGGACTCTGCTGTCTATTTCTGTGCTAGAGGGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AATGAGAAGTTCAAGGGCCAGGCCACACTGAGTGTAGACAAGTCCTCCAGCACAGCCTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -ATACTACGGTCCCGTTTGCTTACTGGGTCCAAGGGACCACGGTCACCGTCTCCTCAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note="Organ: whole body"
 Acad.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       48.0%;
78.5%;
 Sci.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 344; DB 7; I
Pred. No. 2.9e-90;
0; Mismatches 118;
 U.S.A.
                                                                                                                                                                                                                                                                                             567 bp
6 RT0048
                                                                                                                                                                                                                                                                                                                                                                                                  716
                                                                                                                                                                                                                                                                                                                                                                                                                                    615
 97
                                                                                                                                                                                                                                                                                           Ното
(7),
                                                                                                                                                                                                                                                                                                               mRNA
 3491-3496 (2000)
                                                                                                                                                                                                                                                                                             sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 823,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                               linear
                                                                                                                                                                                                                                                                                             CDNA,
                                                                                                                                                                                                                                                                                               mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               581
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      693
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .
                                                                           ð
                                                                                                                      밁
                                                                                                                                               Ş
                                                                                                                                                                                         밁
                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                      ίδ
                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                  뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       뮵
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMMENT
   RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               source
   11
                                                                                                                                                                                                                                                                                             460
                                                                                                                                                                                                                                                                                                                                                                                                                                    341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 562
                                                                                                                        142
                                                                                                                                                        580
                                                                                                                                                                                                                                                               262
                                                                                                                                                                                                                                                                                                                                 322
                                                                                                                                                                                                                                                                                                                                                                  400
                                                                                                                                                                                                                                                                                                                                                                                                    382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        287
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             227
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 440;
                                                                                        640
                                                                                                                                                                                          202
                                                                                                                                                                                                                           520
                                                     82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Contact: Simpson A.J.G.
Laboratory of Cancer Genetics
Ludwig Institute for Cancer Research
Rua Prof. Antonio Prudente 109, 4 andar, 01509-010,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           20202663
10737800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Seg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Email: asimpson@ludwig.org.br
This sequence was derived from the FAPESP/LICR Human Cancer Genome
Project. This entry can be seen in the following URL
(http://www.ludwig.org.br/scripts/gethtml2.pl?tl=MR4&t2=MR4-RT0048-
210201-003-e06&t3=2001-02-21&t4=1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Brazil
                                                                                                                                                                                                                                                                                                                                                 ATCGAGCTCACTCAGTCTCCAGCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATG
                                                                                                                                                                                                                                                                                                                                                                                                                      CCGTCTCCTCAGGTGGAGGCGGTTCAGGCGGAGGTGGCT-CTGGCGGTGGCGGATCGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCAGCACAGCCTACATGGAGCTCCGCAGCCTGACATCTGAGGATTCTGCAGTCTATTACT
                                                                           GCTGCCACTTATTACTGCCATCAGCGGAGTAGTTACCCCGCTCACGTTCGGTGCTGGGACA 699
                                                                                                                                                                                                                                                                                               ACCTGCAGTGGCAGCTCAAGTATAAGTTACATGCACTGGTACCAGCAGAAGCCTGTCACC
                                                                                                                                                                                                                                                                                                                                                                                                    CCGTCTCCTCATGTGGAGGCGGTTCAGGCGGAGGTGGCTCCTGCCGGTGGCGGATCTGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GTGCTAGAGGGGACTACTATAGGCGCTACTTTGACTTGTGGGCTCAAGGGACCACGCTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GTGCAAGAG-----ATACTACGGTCCCGTTTGCTTACTGGGTCCAAGGGACCACGGTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GCAGCACAGCCTATATGGAGCTCACTAGGCTGACATCTGAGGACTCTGCTGTCTATTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GAGGGAGTACTGATACAATGAGACTTCAAGGCAGGGCCACACTGAGGGTAGACAAGTCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GTGGTACTAACTACAAGCAGAAGTTCAAGGGCAAGGCCACATTGACTGTAGACAAGTCCT
                                                                                                                                             AGTGGCAGTGGGTCTGGGGACCTCTTATTCTCTCACAATCAGCAGCATGGAGGCTGTAGAT
                                                       GCTGCCACTTATTACT-CCAGGAGTGGAGTGGTTATCC-TACACTTTCGGAGGGGGGACA
                                                                                                                          AGTGGCAGTGGGTCTGGGACCTCTTATTCTCTCACAATCAACCGAATGGAGGCTGAGGAT
                                                                                                                                                                                                                TCCCCCAAAAGATGGATTTATGACACATCCAAACTGGCTTCTGGAGTCCCTGCTCGCTTC
                                                                                                                                                                                                                                                                                                                                 ATTGAGCTCACCCAGTCTCCAGCAATCATGTCTGCATCTCCAGGGGAGAGGGTCACCATG
                                                                                                                                                                                          TCCCCCAGACTCCTGATTTATGACACATCCAACGTGGCTCCTGGAGTCCCTTTTCGCTTC
                                                                                                                                                                                                                                                             ACCTGCAGTGCCAGCTCAAGTATACGTGACATATATTGGTACCTACAGAAGCCTGGATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               primer: puc 18 forward.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      +55-11-2704922
+55-11-2707001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /organism="Homo sapienu
mol type="mRNA"
/db_xref="taxon:9606"
/dev_stage="Adult"
/clone_lib="RT0048"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /note="Organ: kidney_tumor; Vector: puc18; Site_1: SmaI; Site_2: SmaI, A mini-library was made by cloning products derived from ORESTES PCR (U.S. Letters Patent application No. 195,716 - Ludwig Institute for Cancer Research) profiles into the pUC 18 vector. Reverse transcription of tissue mRNA and cDNA amplification were performed under low stringency conditions."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ļ. .567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                46.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    stringency conditions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 <u>,,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 336.4; DB 5;
Pred. No. 4.6e-88;
0; Mismatches 91;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sao
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Paulo-SP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
```

226

4

503

399

383

443 286

25

```
밁
                                                                                                                          δ
                                                                                                                                                                          밁
                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           VERSION
KEYWORDS
                                  S
                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOURCE
ORGANISM
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                               ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL
MEDLINE
PUBMED
                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      source
                                                                                                                                                                                                                                                                                                                                                                              Local Similarity
                                           405
                                                                                     465
                                                                                                                                 345
                                                                                                                                                                             525
405
                                                                                                                                                                                                                      291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ILO-MT0355-220301-500-d11 MT0355 Homo sapiens cDNA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Email: asimpson@ludwig.org.br
This sequence was derived from the FAPESP/LICR Human Cancer Genome
Project. This entry can be seen in the following URL
(http://www.ludwig.org.br/scripts/gethtml2.pl?t1=ILO&t2=ILO-MT0355-
220301-500-dllkt3=2001-03-22&t4=1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        O'Hare,M.J., Soares,F., Brentani,R.R., Reis,L.F., de Souza,S.J. and Simpson,A.J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 585)

Dias Neto, E., Garcia Correa,R., Verjovski-Almeida,S., Briones,M.R.,

Nagai,M.A., da Silva,W. Jr., Zago,M.A., Bordin,S., Costa,F.F.,

Goldman,G.H., Carvalho,A.F., Matsukuma,A., Baia,G.S., Simpson,D.H.,

Brunstein,A., deOliveira,P.S., Bucher,P., Jongeneel,C.V.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Seq primer: puc 18 forward 
High quality sequence star!
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Contact: Simpson A.J.G.
Laboratory of Cancer Genetics
Ludwig Institute for Cancer Research
Rua Prof. Antonio Prudente 109, 4 and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Shotgun sequencing of the human transcriptome with ORF expressed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BI030095.1 GI:14436725
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Proc. Natl.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   sequence tags
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo
                                                                                                                                                                             TAGAGGGGACTACTATAGGCGCTACTTTGACTTGTGGGCCCAAGGGACCACGGTCACCGT
                                                                                                                                                                                                                      AAGAG-----ATACTACGGTCCCGTTTGCTTACTGGGTCCAAGGGACCACGGTCACCGT
                                                                                                                                                                                                                                                                                                           CACAGCCTACATGGAGCTCCGCAGCCTGACATCTGAGGATTCTGCAGTCTATTACTGTGC
                                    GCTCACTCAGTCTCCAGCAATCATGTCTGCATCTCCAGGGGAGAAGGTCACCATGACCTG
                                                                                     CTCCTAATGTGGAGCCGGTTCAGCCGGAGTTGGCTCTGACGTGGCGGATCTGACATTGA
                                                                                                                              CTCCTCAGGTGGAGGCGGTTCAGGCGGAGGTGGCTCTCGGCGGTGGCGGATCGGACATCGA
                                                                                                                                                                                                                                                                  CACAGCCAATATGGAGCTCACAAGGCTACATTCTGAGGACTCTGCTGTCAATTTCTGTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           quality sequence start: 28 quality sequence stop: 584.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             +55-11-2704922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      sapiens (human)
                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                               /clone_lib="MT0355"
/note="Organ: marrow; Vector: puc18; Site_1: SmaI; Site_2: fnote="Organ: marrow; Vector: puc18; Site_1: SmaI; Site_2: SmaI; A mini-library was made by cloning products derived from ORESTES PCR (U.S. Letters Patent application No. 196,716 - Ludwig Institute for Cancer Research) profiles into the pUC 18 vector. Reverse transcription of tissue mRNA and cDNA amplification were performed under low stringency conditions."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Acad. Sci. U.S.A. 97 (7), 3491-3496 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               xref="taxon:9606"
_stage="Adult"
                                                                                                                                                                                                                                                                                                                                                                          45.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        type="mRNA"
                                                                                                                                                                                                                                                                                                                                                   Score 329.4; DB 4;
Pred. No. 5.5e-86;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           andar, 01509-010,
                                                                                                                                                                                                                                                                                                                                                                                                 Length
                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sao
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                       7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Paulo-SP
                                                                                                                                                                                                                                                                                                                                                       Gaps
                                         464
                                                                                                                                 404
                                                                                                                                                                                                                      344
                                                                                                                                                                                                                                                                    526
                                                                                     406
                                                                                                                                                                             466
```

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BF923394/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    맑
                                                                                                                                                                                                                                                                                                                           FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    POCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JOURNAL
MEDLINE
PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
                                                                                                                                                                                                                                                                                                     source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                525 CAAAAGATGGATTTATGACACATCCAAACTGGCTTCTGGAGTCCCTGCTCGCTTCAGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    345 CÁGTGCCÁGCTTAAGTATACGTTÁCATATATTGGTACCAACAGAAGCCTGGATCCTCCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               465 CAGTGGCAGCTCAAGTATAAGTTACATGCACTGGTACCAGCAGAAGCCTGTCACCTCCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 476)

Dias Neto, E., Garcia Correa, R., Verjovski-Almeida, S., Briones, M.R., Nagai, M.A., da Silva, W. Jr., Zago, M.A., Bordin, S., Costa, F.F., Roglidman, G.H., Carvalho, A.F., Matsukuma, A., Baila, G.S., Simpson, D.H., Brunstein, A., deoliveira, P.S., Bucher, P., Jongeneel, C.V., O'Hare, M.J., Soares, F., Brentani, R.R., Reis, L.F., de Souza, S.J. and Simpson, A.J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BF923394 476 bp mRI
QV4-NT0248-271100-585-c10 NT0248 Homo
BF923394
                                                                                                                                                                                                                                                                                                                                                                                        271100-585-c10&t3=2000-11-27&t4=1)
Seq primer: puc 18 forward
                                                                                                                                                                                                                                                                                                                                                                                                                                   Email: asimpson@ludwig.org.br
This sequence was derived from the FAPESP/LICR Human Cancer Genome
Project. This entry can be seen in the following URL
(http://www.ludwig.org.br/scripts/gethtml2.pl?t1=QV4&t2=QV4-NT0248-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Brazil
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Laboratory of Cancer Genetics
Ludwig Institute for Cancer Research
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Tel: +55-11-2704922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Rua Prof. Antonio Prudente 109, 4 andar, 01509-010, Sao Paulo-SP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Contact: Simpson A.J.G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Proc. Natl. Acad. Sci. U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            sequence tags
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Shotgun sequencing of the human transcriptome with ORF expressed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BF923394.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            10737800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGAGCTGAAACGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGAAATAAAACGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CACTTATTACTGCCAGGAGTGGAGTGGTTATCCGTACACGTTCGGAG-GGGGACCAAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CACTTATTACTGCCATCAGCGGAGTAGTTACCCGCTCACGTTCGGTGCTGGGACACAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CAGTGGGTCTGGGACCTCTTATTCTCTCACAATCAACCGAATGGAGGCTGAGGATGCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CAGTGGGTCTGGGACCTCTTATTCTCTCACAATCAGCAGCATGGAGGCTGTAGATGCTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CAGACTCCTGATTTATGACACATCCAACGTGGCTCCTGGAGTCCCTTTTCGCTTCAGTGG
                                                                                                                                                                                                                                                                                                                        quality sequence stop:
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               +55-11-2707001
                                                                                                                                                                                                                                                                                                                                                                     quality sequence start:
/Clone_lib="NT0248"
/note="Organ: nervous tumor; Vector: puc18; Site_1: Smal;
/note="Organ: nervous tumor; Vector: puc18; Site_1: Smal;
Site_2: Smal; A mini-library was made by cloning_products
derived from ORSSTES PCR (U.S. Letters Patent application
NO. 196,716 - Ludwig Institute for Cancer Research)
profiles into the pUC 18 vector. Reverse transcription of
tissue mRNA and cDNA amplification were performed under
low stringency conditions."
                                                                                                                                                                                                      /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
/dev_stage="Adult"
                                                                                                                                                                                                                                                                                                     . .476
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GI:12319282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              717
                                                                                                                                                                                                                                                                                                                                                395.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (7), 3491-3496 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NA linear
sapiens cDNA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EST 19-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               226
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         286
```

```
RESULT 13
BF857861/c
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                COMMENT
                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DEFINITION
                                                                                                                                                                                                                         JOURNAL
MEDLINE
PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM
                                                                                                                                                                                                                                                                                       TITLE
                                                                                                                                                                                                                                                                                                                                                                               AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    490
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              430
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      670
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              019
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 351;
                                                                                                                                                                                                                                                                     Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 498)
Dias Neto, E., Garcia Correa, R., Verjovski-Almeida, S., Briones, M.R.,
Nagal, M.A., da Silva, W. Jr., Zago, M.A., Bordin, S., Costa, F.F.,
Goldman, G.H., Carvalho, A.F., Matsukuma, A., Baia, G.S., Simpson, D.H.,
Brunstein, A., deOliveira, P.S., Bucher, P., Jongeneel, C.V.,
O'Hare, M.J., Soares, F., Brentani, R.R., Reis, L.F., de Souza, S.J. and
Simpson, A.J.
Shotgun sequencing of the human transcriptome with ORF expressed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BF857861
QV1-FT0202-071100-465-g03
BF857861
                                        Email: asimpson@ludwig.org.br

Email: asimpson@ludwig.org.br

This sequence was derived from the FAPESP/LICR Human Cancer Genome

Project. This entry can be seen in the following URL

(http://www.ludwig.org.br/scripts/gethtml2.pl?tl=QV1&t2=QV1-FT0202-

0711100-465-903&t5=2000-11-07&t4=1)
Seq primer: puc 18 forward High quality sequence start: 8 High quality sequence stop: 497
                                                                                                                                                              Contact: Simpson A.J.G.
Laboratory of Cancer Genetics
Ludwig Institute for Cancer Research
Rua Prof. Antonio Prudente 109, 4 and
                                                                                                                                                                                                                                                        Proc. Natl.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BF857861.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                      lomo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITGACTTGTGGGGCCAAGGGACCACGCTCACCGTCTCCTCATGTGGAGGGGGTTCAGTC 416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGTTACCCGCTCACGTTCGGTGCTGGGACACAGTTGGAAATAAAACGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GACGTGGCTCCTGGAGTCCCTTGTCGCTTCAGTGGCAGTGGGTCTGGGACCTCTTATTCT 176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGAGGTGGCTCTGTCGGTGTCGGATCTGACATTGAGCTCACCCAGTCTCCAGCAATCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGTTATCCGTACACGTTCGGAGGGGGGGACCAAGCTGGAGCTGAAACGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTCACAATCTACCGAATGGAGGCTGAGGATGCTGCCACTTATTACTGCCAGGAGTGGAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTCACAATCAGCAGCATGGAGGCTGTAGATGCTGCCACTTATTACTGCCATCAGCGGAGT 669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAACTGGCTTCTGGAGTCCCCTGCTCGCTTCAGTGGCAGTGGGTCTGGGACCTCTTATTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATATATTGGTACCAACAGAAGCCTGGATCCTCCCCCAGACTCCTGATTTATGACACATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATGCACTGGTACCAGCAGAAGCCTGTCACCTCCCCAAAAGATGGATTTATGACACATCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCTGCATCTCCAGGGGAGAGGGTCACCATGACCTGCAGTGCCAGCTCAAGTATACGTTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TCTGCATCTCCAGGGGAGAAGGTCACCATGACCTGCAGTGGCAGCTCAAGTATAAGTTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TTTGCTTACTGGGTCCAAGGGACCACGGTCACCGTCTCCTCAGGTGGAGGCGGTTCAGGC 369
                                                                                                                      +55-11-2707001
                                                                                                                                     +55-11-2704922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GI:12245605
                                                                                                                                                                                                                                                          Acad.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              44.2%;
86.0%;
                                                                                                                                                                                                                                                          Sci.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 316.8;
Pred. No. 2.8
                                                                                                                                                                                                                                                          U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 498 bp mRI
FT0202 Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                           97
                                                                                                                                                                 4 andar,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2.8e-82;
                                                                                                                                                                                                                                                          (7),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 2;
                                                                                                                                                                                                                                                          3491-3496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 sapiens cDNA,
                                                                                                                                                                 01509-010,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               linear
                                                                                                                                                                                                                                                           (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        89
                                                                                                                                                                   Sao
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   296
                                                                                                                                                                   REFERENCE
AUTHORS
                                                                                                                                                                                                                                                          ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                   RESULT 14
BF857860/c
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ঠ
    COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                          SOURCE
                                                                                                                                                                                                                                                                                                       DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Loc
Matches
                 JOURNAL
MEDLINE
PUBMED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                             TITLE
                                                                                                                                                                                                                              ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       375
                                                                                                                                                                                                                                                                                                                                                                                                                                                        195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            495
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     619
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   255
```

```
347;
                                                                                                                                                                        1 (bases 1 to 488)
Dias Neto, E., Garcia Correa, R., Verjovski-Almeida, S., Briones, M.R., Dias Neto, E., Garcia Correa, R., Verjovski-Almeida, S., Briones, M.R., Dias, M.A., da Silva, W. Jr., Zago, M.A., Bordin, S., Costa, F.F., Goldman, G.H., Carvalho, A.F., Matsukuma, A., Baia, G.S., Simpson, D.H., Brunstein, A., deOliveira, P.S., Bucher, P., Jongeneel, C.V., O'Hare, M.J., Soares, F., Brentani, R.R., Reis, L.F., de Souza, S.J. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BF857860
QV1-FT0202-071100-465-f03
                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa;
Mammalia; Eutheria;
                          10737800
                                                     20202663
                                                                                                   sequence tags
                                                                                                                           Shotgun sequencing of the human transcriptome
                                                                                                                                                        Simpson, A.J.
                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BF857860.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BF857860
                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTCACGTTCGGTGCTGGGACACAGTTGGAAATAAAACGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AGCAGCATGGAGGCTGTAGATGCTGCCACTTATTACTGCCATCAGCGGAGTAGTTACCCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CCTGGAGTCCCTTTTCGCTTCAGTGGCAGTGGGTCTGGGACCTCTTATTCTCTCACAATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TCTGGAGTCCCTGCTCCACTCAGTGGCAGTGGGGTCTGGGACCTCTTATTCTCTCACAATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TACCAACAGAAGCCTGGATCCTCCCCCAGACTCCTGATTTATGACACATCCAACGTGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TACCAGCAGAAGCCTGTCACCTCCCCCAAAAGATGGATTTATGACACATCCAAACTGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CCAGGGGAGAAGGTCACCATGACCTGCAGTGGCAGCTCAAGTATAAGTTACATGCACTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGGGGCCAAGGGACCACGCTCACCGTCTCCTCATGTGGAGTCGCTTCAGTCGGAGGTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGGGTCCAAGGGACCACGGTCACCGTCTCCTCAGGTGGAGGCGGTTCAGGCGGAGGTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CCAGGGGAGAGGGTCACCATGACCTGCAGTGCCAGCTCAAGTATACGTTACATATATTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCTGGCGATGGCGGATCTGACATTGAGCTCACCCAGTCTCCAGCAATCATGTCTGCATCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCTGGCGGTGGCGGATCGGACATCGAGCTCACTCAGTCTCCAGCAATCATGTCTGCATCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AACCGAATGGAGGCTGAGGATGCTGCCACTTATTACTGCCAGGAGTGGAGTGGTTATCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    44.0%;
llarity 87.0%;
Conservative
                                                                             Natl.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /dev_stage="Adult"
/clone lib="FT0202"
/clone lib="FT0202"
/clone lib="FT0202"
/note="Organ: prostate tumor; Vector: puc18; Site_1: SmaI;
/note="Organ: prostate tumor; Vector: puc18; Site_1: SmaI;
Site_2: SmaI; A mini-library was made by cloning products
derived from ORESTES PCR (U.S. Letters Patent application
No. 196,716 - Ludwig Institute for Cancer Research)
profiles into the pUC 18 vector. Reverse transcription of
tissue mRNA and cDNA amplification were performed under
Simpson A.J.G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /mol_type="mRNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      organism="Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GI:12245604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  stringency conditions."
                                                                                                                                                                                                                                                                                                                                   Chordata; Craniata; Vertebrata; Euteleostomi; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       <u>..</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 315.8; DB 2; pred. No. 5.6e-82; 0; Mismatches 52;
                                                                             U.S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    488 bp
3 FT0202
                                                                             Þ
                                                                             97
                                                                             (Z)
,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 mRNA linear
Homo sapiens cDNA,
                                                                             3491-3496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                (2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EST 16-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 376
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      436
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     196
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        256
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           558
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       378
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
```

```
DEFINITION ACCESSION
                                                                                                                                                                                                                                                      RESULT 15
BQ373705/c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORIGIN
                                                                                                    KEYWORDS
                                                                                                                                     VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Loc
Matches
                                   ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           505
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    428
                                                                                                                                                                                                                                                                                                                                                                                     128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        625
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   565
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     343;
                                                                                              BQ373705
QV1-FT0170-040700-265-b10
BQ373705
BQ373705.1 GI:21049219
EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Email: asimpson@ludwig.org.br
This sequence was derived from the FAPESP/LICR Human Cancer Genome
Project. This entry can be seen in the following URL
(http://www.ludwig.org.br/scripts/gethtml2.pl?tl=QV1&t2=QV1-FT0202-
071100-465-f03&t3=2000-11-07&t4=1)
Seq.primer: puc 18 forward
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Laboratory of Cancer Genetics
Ludwig Institute for Cancer Research
Rua Prof. Antonio Prudente 109, 4 andar, 01509-010,
Brazil
                                   Homo
                                                             Homo
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Tel: +55-11-2704922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GTCCCTGCTCAGTGGCAGTGGGTCTGGGACCTCTTATTCTCTCACAATCAGCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CAGAAGCCTGTCACCTCCCCCAAAAGATGGATTTATGACACATCCAAACTGGCTTCTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GAGAAGGTCACCATGACCTGCAGTGGCAGCTCAAGTATAAGTTACATGCACTGGTACCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGTGGCGGATCGGAGCTCACTCAGTCTCCAGCAATCATGTCTGCATCTCCAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                            TTCGGTGCTGGGACACAGTTGGAAATAAAACGG 717
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATGGAGGCTGTAGATGCTGCCACTTATTACTGCCATCAGCGGAGTAGTTACCCGCTCACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CAGAAGCCTGGATCCTCCCCCAGACTCCTGATTTATGACACATCCAACGTGGCTCCTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GAGAGGGTCACCATGACCTGCAGTGCCAGCTCAAGTATACGTTACATATATTGGTACCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GATGGCGGATCTGACATTGAGCTCACCCAGTCTCCAGCAATCATGTCTGCATCTCCAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CAAGGGACCACGCTCACCGTCTCCTCATGTGGAGTCGCTTCAGGCGGAGGTGGCTCTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CAAGGGACCACGGTCACCGTCTCCTCAGGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATGGAGGCTGAGGATGCTGCCACTTATTACTGCCAGGAGTGGAGTGGTTATCCGTACACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GTCCCTTTTCGCTTCAGTGGCAGTGGGTCTGGGACCTCTTATTCTCTCACAATCAACCGA 189
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                quality sequence start: 8 quality sequence stop: 487. Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          +55-11-2707001
                                   sapiens
                                                             sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note="Organ: prostate_tumor; Vector: puc18; Site_1: SmaI; Site_2: SmaI; A mini-library was made by cloning products derived from ORESTES PCR (U.S. Letters Patent application No. 196,716 - Ludwig Institute for Cancer Research) profiles into the pUC 18 vector. Reverse transcription of tissue mRNA and cDNA amplification were performed under testing the publication of the publication were performed under the publication was publication were performed under the publication was performed 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 dev/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     organism="Homo sapiens"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         . .488
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       xref="taxon:9606"
v stage="Adult"
one_lib="FT0202"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       stringency conditions."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               43.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        _type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 313; DB 2;
Pred. No. 3.7e-81;
0; Mismatches 50
                                                                                                                                                                                            427 bp mRNA lir
FT0170 Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                     96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 488
                                                                                                                                                                                                                            linear
                                                                                                                                                                                            CDNA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sao Paulo-SP,
                                                                                                                                                                                         mRNA sequence.
                                                                                                                                                                                                                         EST 21-MAY-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 <u>;</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        684
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                 밁
                                                                                                                                                        á
                                                                                                                                                                                                                      맑
                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                              片
                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL MEDLINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PUBMED
```

밁 Ś 밁 Ś 밁 Ś 밁 Ś 밁 Ś 밁 Ś 밁 Ś

```
Matches 367;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     source
                                 572
                                                                                                                                                                                                                                   452
                                                                                                                                                                                                                                                                                    247
                                                                                                                                                                                                                                                                                                                      392 GATCGGACATCGAGCTCACTCAGTCTCCAGCAATCATGTCTGCATCTCCAGGGGAGAAGG
                                                                                                                                                                                                                                                                                                                                                                                       307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             220 AAGTCCTCCAGCACAGCCTACATGGAGCTTCCGCAGCCTGACATCTGAGGATTCTGCAGTC
                                                                                                                                                                                    187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    280 TATTACTGTGCAAGAG-----ATACTACGGTCCCGTTTGCTTACTGGGTCCAAGGGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Email: asimpson@lidwig.org.br
This sequence was derived from the FAPESP/LICR Human Cancer Genome
Project. This entry can be seen in the following URL
(http://www.ludwig.org.br/scripts/gethtml2.pl?tl=QVI&t2=QV1-FT0170-040700-265-bl0&t3=2000-07-04&t4=1)
Seq.primer: puc 18 forward
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (bases 1 to 427)

Dias Neto,E., Garcia Correa,R., Verjovski-Almeida,S., Briones,M.R.,

Nagai,M.A., da Silva,W. Jr., Zago,M.A., Bordin,S., Costa,F.F.,

Goldman,G.H., Carvalho,A.F., Matsukuma,A., Baia,G.S., Simpson,D.H.,

Brunstein,A., deOliveira,P.S., Bucher,P., Jongeneel,C.V.,

O'Hare,M.J., Soares,F., Brentani,R.R., Reis,L.F., de Souza,S.J. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Contact: Simpson A.J.G.
Laboratory of Cancer Genetics
Ludwig Institute for Cancer R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Shotgun sequencing of the human transcriptome with ORF expressed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Fax: +55-11-2707001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Tel: +55-11-2704922
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Rua Prof. Antonio Prudente 109,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10737800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Proc. Natl.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         sequence tags
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
CTCGCTTCAGTGGCAGTGGGTCTGGGACCTCTTATTCTCTCACAATCAGCAGCATGGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                         ACGGT--CACCGTCTCCTCAGGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCG
                                                                                                                                                                                                                                                                                  GATCTGACATTGAGCTCACCCAGTCTCCAGCAATCATGTCTGCATCTCCAGGGGAGAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAGTCCTCCAGCACAGCCTATATGGAGCTCACTAGGCTGACATCTGAGGACTCTGCTGTC
                                                                                   CTGGATCCTCCCCCAGACTCCTGATTTATGACACATCCAACGTGGCTCCTGGAGTCCCTT
                                                                                                                CTGTCACCTCCCCCAAAAGATGGATTTATGACACATCCAAACTGGCTTCTGGAGTCCCTG
                                                                                                                                                                                    TCACCATGACCTGCAGTGCCAGCTCAAGTATACGTTACATATTTGGTACCAACAGAAGC
                                                                                                                                                                                                                      TCACCATGACCTGCAGTGGCAGCTCAAGTATAAGTTTACATGCACTGGTACCAGCAGAAGC
                                                                                                                                                                                                                                                                                                                                                                                          ACGGTCACACCGTCTCCTCATGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TATTTCTGTGCTAGAGGGGACTACTATAGGCGCTACTTTGACTTGTGGGTCCAAGGGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       quality
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /note=Torgan: prostate tumor; Vector: puc18; Site 1: SmaI; Site 2: SmaI; A mini-library was made by cloning products derived from ORESTES PCR (U.S. Letters Patent application No. 196,716 - Ludwig Institute for Cancer Research) profiles into the pUC 18 vector. Reverse transcription of tissue mRNA and cDNA amplification were performed under low stringency conditions."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1. .427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
/dev_stage="Adult"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ity sequence stop: 426.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Acad. Sci. U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      42.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                lib="FT0170"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 307.8; DB 9 Pred. No. 1.2e-79, 0; Mismatches 53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Research
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4 andar,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (7), 3491-3496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01509-010,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                427;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sao
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Paulo-SP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          333
                                                                                   68
                                                                                                                                     571
                                                                                                                                                                                      128
                                                                                                                                                                                                                                                                                       188
                                                                                                                                                                                                                                                                                                                                        451
                                                                                                                                                                                                                                                                                                                                                                                          248
                                                                                                                                                                                                                                                                                                                                                                                                                                         391
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             279
                                    631
```

Search ( Job time	DЬ	γQ	đ
Search completed: February 18, 2005, 23:51:41 Job time : 2576.88 secs	7 CTGAGGA 1	632 CTGTAGA 638	67 TTCGCTTCAGTGGCAGTGGGTCTGGGACCTCTTATTCTCTCACAATCAACCGAATGGAGG 8

,			
L.			
			,

```
Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Run on:
                                                                                                                                                                                                                                                                                        Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
 475.2
432
417.2
4114.4
4114.4
4018.2
400.8
400.2
398.2
398.2
398.2
                                                                                                                                                                                                                                    Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             seq length: 0
seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                       GenEmbl:*
1: gb_ba:*
2: gb_htg:*
3: gb_in:*
4: gb_om:
5: gb_po:
6: gb_pa:
6: gb_ph:
9: gb_r:
11: gb_g:
11: gb_g:
13: gb_u
14: gb_u
14: gb_u
Query
Match Length DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           February 18, 2005, 18:39:34 ; Search time 3216.24 Seconds (without alignments)
10756.968 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4708233 seqs, 24227607955 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 agtattgtgatgacccagac.....cctcagtcaccgtctcctca 714
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-075-947A-2
714
                                                                                                                                                                                                                                                                                                                                      gb_pat:
gb_ph: *
gb_pr: *
gb_pr: *
gb_ro: *
gb_sts: *
gb_sts: *
gb_un: *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      gb_ba:*
gb_htg:*
gb_in:*
                                                                                                                                                                                                                                                                                                                                                                                                                                               gb_om: *
 714
1173
1371
1389
1389
1389
1388
1388
1520
752
1520
1520
1520
1520
1527
729
1632
1733
733
6 AR231455
6 BD222935
6 BX0223359
6 AX023359
6 AX023361
10 MUSVKLI
10 MMZSVA76
6 AR481833
6 AR481833
6 AR481831
1 AR364987
1 SYN507107
6 AR481837
1 SYN7A41
6 AR60061
6 AR60061
6 AR6088010
                                                                                                                                                                                                                                                                      SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9416466
          AR231455 Sequence
AR231457 Sequence
BD222935 Heteromin
AX023359 Sequence
BD222936 Heteromin
AX023361 Sequence
CQ856167 Sequence
L41689 Mus musculu
Z59476 Mus musculu
AR481833 Sequence
AR481831 Sequence
AR481831 Sequence
AR481831 Sequence
AR481831 Sequence
AR481831 Sequence
AR481831 Sequence
AR507107 Synthetic
AR481837 Sequence
AR481837 Sequence
M68968 Synthetic
A62066 Sequence 1
A62066 Sequence 2
                                                                                                                                                                                                                                   Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 1
```

45	44	43	42	41	40	39	38	37	36	35	34	IJ IJ	32	31	30	29	28	27	26	25	24	23	22	21	20
	312.8	•	312.8	313.4	314.8	317.2	317.2	318	318	323.6	336.6	336.6	347	351	351	352.6		393.2	393.2	393.2	393.6	394.8	396.2		398.2
		43.8		43.9	44.1	44.4	44.4	44.5	44.5	45.3	47.1	47.1	48.6	49.2	49.2	49.4		55.1	55.1	55.1		•		55.5	
360	1702	1411	1056	444	345	372	371	420	420	354	796	796	1701	1701	824	855	1931	739	739	739	720	734	738	738	737
10	თ	6	σ	12	10	12	12	6	σ	10	6	6	12	12	12	10	σ	9	9	6	0	9	σ	თ	σ
MUSIGHADX	AX363235	AX363234	AX363232	AY648611	MUSIGMQ520	AY648617	AY648618	AR365720	AR169919	MUSIGHAEI	AX023355	BD222932	SC0564232	SYNCHIPL	SYNMA15C5	MUSALCA	AX590282	AR306901	BD226888	A95266	AR364986	AR343614	I45910	E07990	AR154831
M36217 Mouse Ig he	AX363235 Sequence	AX363234 Sequence	AX363232 Sequence	AY648611 Mus muscu	M76414 Mouse IgM c	AY648617 Mus muscu	AY648618 Mus muscu	AR365720 Sequence	AR169919 Sequence	M36228 Mouse Ig he	AX023355 Sequence	BD222932 Heteromin	AJ564232 Synthetic	M69273 Cloning vec		L43544 Mus musculu	AX590282 Sequence	AR306901 Sequence	BD226888 Improveme	A95266 Sequence 12	AR364986 Sequence	AR343614 Sequence	I45910 Sequence 6	E07990 DNA encodin	AR154831 Sequence

## ALIGNMENTS

₽ <b>Q</b>	Db	Q	ф	γŞ	Db	Qy	Query Match Best Local : Matches 71	ORIGIN	source	FEATURES	TOTALINA		TITLE	REFERENCE		ORGANISM	SOURCE	KEYWORDS	VERSION	ACCESSION	LOCUS	AR231455
181 CGCTTCACTGGCAGTGGATATGGGACGGATTTCACCTTTCACCATCAGCACTGTGCAGGCT 240	121 GGCAGTCTCCGAAACTGCTGATATACTCTGCATCCAATCGCTACACTGGAGTCCCTGAT 180	121 GGGCAGTCTCCGAAACTGCTGATATACTCTGCATCCAATCGCTACACTGGAGTCCCTGAT 180	61 ATAACCTGCAAGGCCAGTCAGAGTGTGAGTAATGATGTGGCTTGGTACCAACAGAAGCCA 120	61 ATAACCTGCAAGGCCAGTCAGAGTGTGAGTAATGATGTGGCTTGGTACCAACAGAAGCCA 120	1 AGTATTGTGATGACCCAGACTCCCAAATTCCTGCTTGTATCAGCAGGAGACAGGGTTACC 60	1 AGTATTGTGATGACCCAGACTCCCAAATTCCTGCTTGTATCAGCAGGAGACAGGGTTACC 60	Query Match 100.0%; Score 714; DB 6; Length 714; Best Local Similarity 100.0%; Pred. No. 9.1e-179; Matches 714; Conservative 0; Mismatches 0; Indels '0; Gaps 0;	/mol_type="genomic DNA"		ratent; 05 0101070- 2 17-05F-2002; Location/Qualifiers		anti-ganglioside GD2 antibodies, cells expressing same and related	Single chain FV polynucleotide or peptide constructs of		Unclassified.	Unknown.	Unknown.		AR231455.1 GI:27272557		AR231455 714 bp DNA Linear PAT 20-DEC-2002	

AR088010 Sequence

```
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 2
AR231457
LOCUS
                                                                              Ş
                                                                                                                   밁
                                                                                                                                                Ś
                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOURCE
ORGANISM
                    S
                                                   멍
                                                                                                                                                                                                              á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 뮍
                                                                                                                                                                                                                                                                                                                    ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DEFINITION
                                                                                                                                                                                                                                                  Query Match
Best Local Sim
Matches 714;
                                                                                                                                                                                                                                                                                                                                                                      source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            421
                                                    121
                                                                                   121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                241
                      181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   661
                                                                                                                   61
                                                                                                                                                    61
                                                                                                                                                                                    Н
                                                                                                                                                                                                                                                                                                                                                                                                   methods
Patent:
                                                                                                                                                                                                                                                                                                                                                                                                                              Unclassified.

1 (bases 1 to 1173)

1 (bases 1, K.V., Larson, S.M., Guo, H.-F., Rivlin, K. and Sadelain, M. Cheung, N.-K.V., Larson, S.M., Guo, H.-F., Rivlin, K. and Sadelain, M. Single chain FV polymucleotide or peptide constructs of single chain FV polymucleotide or peptide constructs of anti-ganglioside GD2 antibodies, cells expressing same and related
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 4 from AR231457 GI:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Unknown.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Unknown
                                                                                                                                                                                                                                                                    Similarity
                                                                     GGGCAGTCTCCGAAACTGCTGATATACTCTGCATCCAATCGCTACACTGGAGTCCCTGAT
                                                                                                                                                                                                     AGTATTGTGATGACCCAGACTCCCAAATTCCTGCTTGTATCAGCAGGAGACAGGGTTACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATAACCTGCAAGGCCAGTCAGAGTGTGAGTAATGATGTGGCTTGGTACCAACAGAAGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGCTGGTGGAAGCACAAATTATAATTCG
 CGCTTCACTGGCAGTGGATATGGGACGGATTTCACTTTCACCATCAGCACTGTGCAGGCT
                                                   GGGCAGTCTCCGAAACTGCTGATATACTCTGCATCCAATCGCTACACTGGAGTCCCTGAT
                                                                                                                   ATAACCTGCAAGGCCAGTCAGAGTGTGAGTAATGATGTGGCTTGGTACCAACAGAAGCCA
                                                                                                                                                                                   AGTATTGTGATGACCCAGACTCCCAAATTCCTGCTTGTATCAGCAGGAGACAGGGTTACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TACGGCTATGCTTTGGACTACTGGGGTCAAGGAACCTCAGTCACCGTCTCCTCA 714
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATGAACAGTCTGCAAACTGATGACACAGCCATGTACTACTGTGCCAGTCGGGGGGGTAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATGAACAGTCTGCAAACTGATGACACAGCCATGTACTGCTGCCAGTCGGGGGGGTAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCTCTTATGTCCAGACTGAGCATCAGCAAGACAACTCCAAGAGCCAAGTTTTCTTAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCTCTTATGTCCAGACTGAGCATCAGCAAGGACAACTCCAAGAGCCAAGTTTTCTTAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGCTGGTGGAAGCACAAATTATAATTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGCACTGTCTCTGGGTTTTCATTAACCAATTATGGTGTACACTGGGTTCGCCAGCCTCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GTGCAGGTGAAGGAGTCAGGACCTGGCCTGGTGGCGCCCCTCACAGAGCCTGTCCATCACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GTGCAGGTGAAGGAGTCAGGACCTGGCCTGGTGGCGCCCTCACAGAGCCCTGTCCATCACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTGGAAATAAAAGGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCGGATCGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTGGAAATAAAAGGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCCGGTGGCGGATCGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TACGGCTATGCTTTGGACTACTGGGGTCAAGGAACCTCAGTCACCGTCTCCTCA
                                                                                                                                                                                                                                                  100.0%; ilarity 100.0%; Conservative
                                                                                                                                                                                                                                                                                                                                                                                US 6451995-A 4 17-SEP-2002;
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GTCTCTGGGTTTTCATTAACCAATTATGGTGTACACTGGGTTCGCCAGCCTCCA
                                                                                                                                                                                                                                                                                                                                                 organism="unknown"
                                                                                                                                                                                                                                                                                                                                /mol_type="genomic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GI:27272559
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1173
patent US 645
                                                                                                                                                                                                                                                   0,
                                                                                                                                                                                                                                                Score 714; DB 6;
Pred. No. 8.8e-179;
; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  173 bp
6451995.
                                                                                                                                                                                                                                                                                                                                    DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DNA
                                                                                                                                                                                                                                                                                Length 1173;
                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PAT
                                                                                                                                                                                                                                                  <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20-DEC-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 714
                                                                                   180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              480
                                                    180
                                                                                                                   120
                                                                                                                                                                                   60
                                                                                                                                                                                                                 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               300
                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 3
BD222935
LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         á
                                                                  FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 음 성
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               맑
                                                                                                                                                                                                                                                                                                                                                     COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                   JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM
                                                    source
                                                                                Patent: JP 2002521053-A 2:
MICROMET AG

OS Homo sapiens (human)
OS Mus musculus (mouse)
PN JP 2002521053-A/29
PD 16-JUL-1999 JP 200056
PF 28-JUL-1998 EP 9811
PI PETER KUPER, TORSTEN I
BORSCHERT,
PI FLORIAN ZETTL
PC C12N15/09, A61K35/76, I
PC C12N15/00, C12P21/02, G0
PC (C12P21/02, C12R1:91)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (Dases 1 to 1371)

Kufer,P., Dreier,T., Baeuerle,P.A., Borschert,K. and Zettl,F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Heterominibodies.
BD222935
BD222935.1 GI:33032705
JP 2002521053-A/29.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                   Heterominibodies
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TACGGCTATGCTTTGGACTACTGGGGTCAAGGAACCTCAGTCACCGTCTCCTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCTCTTATGTCCAGACTGAGCATCAGCAAGGACAACTCCAAGAGCCAAGTTTTCTTAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGCTGGTGGAAGCACAAATTATAATTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGAAAGGGTCTGGAGGTGGCTGGGAGTAATATGGGCTGGTGGAAGCACAAATTATAATTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGCACTGTCTCTGGGTTTTCATTAACCAATTATGGTGTACACTGGGTTCGCCAGCCTCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGCACTGTCTCTGGGTTTTCATTAACCAATTATGGTGTACACTGGGTTCGCCCAGCCTCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GTGCAGGTGAAGGAGTCAGGACCTGGCCTGGTGGCGCCCTCACAGAGCCTGTCCATCACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GTGCAGGTGAAGGAGTCAGGACCTGGCCTGGTGGCGCCCTCACAGAGCCTGTCCATCACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTGGAAATAAAAGGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCGGATCGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CGCTTCACTGGCAGTGGATATGGGACGGATTTCACTTTCACCATCAGCACTGTGCAGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTGGAAATAAAAGGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCGGATCGCAG
                                                                                                                                                                                                                                              Homo sapiens (human)
Mus musculus (mouse)
JP 2002521053-A/29
16-JUL-2002
28-JUL-1999 JP 2000562401
28-JUL-1998 EP 98114082.5
PETER KUFER, TORSTEN DREIER, PATRICK A BAEUERLE, KATRIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           sapiens (human)
                                                                                                                  C12N5/10, C12P21/02, G01N33/53, G01N33/53//(C12N5/10, C12R1:91), (C12P21/02, C12R1:91), C12N15/00, C12N5/00, A61K37/02, A61K37/66, (C12N5/00, C12R1:91)
Heterominibodies
                                                                                                                                                                  FLORIAN ZETTL
C12N15/09, A61K35/76, A61K38/00, A61K38/21, A61P35/00, A61P35/02, C12N15/09, A61K35/76, A61K38/00, A61K35/21, A61P35/00, A61P35/02, C07K19/00, C12R1:91), C12N5/10, C12P21/02, G01N33/53/, G01N33/53// (C12N5/10, C12R1:91), C12N5/10, C12P21/02, G01N33/53/, G01N33/53// (C12N5/10, C12R1:91), C12N5/10, C12P21/02, G01N33/53/, G01N33/53// (C12N5/10, C12P21/02, G01N33/53/)
                                                   Location/Qualifiers
/organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"
                                                                                   Location/Qualifiers (10). (1359).
                                                                                                                                                                                                                                                                                                                                                                                   29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1371
                                                                                                                                                                                                                                                                                                                                                                                   16-JUL-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  đđ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    17-JUL-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                300
```

45

1

```
RESULT 4
AX023359
LOCUS
DEFINITION
ACCESSION
                                                                                                                      VERSION
KEYWORDS
SOURCE
ORGANISM
                                        REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ર્
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  189
                                                                                                                                                                                                                                                                                                                                                                                                       534
                                                                                                                                                                                                                                                                                                                                                                                                                                       549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        129
                                                                                                                                                                                                                                                                                                                                                      594
                                                                                                                                                                                                                                                                                                                                                                                 609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  243
                                                                                                                                                                                                                                                                                                 654
                                                                                                                                                                                                                                                                                                                           669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                585;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           69
                                                                                                                                                             AX023359
Sequence 30
AX023359
AX023359.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ω
Heterominibodies
Patent: WO 0006605-A 30 10-FEB-2000;
KUFER PETER (DE); ZETTL FLORIAN (DE); DREIER 'BAEUERLE PATRICK A (DE); BORSCHERT KATRIN (DE)
BIOMEDIZINIS (DE)
                                                                  Kufer, P.,
                                                                                                         Eukaryota;
                                                                                                                     Homo sapiens
                                                                                              Mammalia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TATTGTGATGACCCAGACTCCCAAATTCCTGCTTGTATCAGCAGGAGACACGGGTTACCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CACCTGCAAGGCCAGTCAGAATGTGGGTACTAATGTAGCCTGGTATCAACAGAAACCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AACCTGCAAGGCCAGTCAGAGTGTGAGTAATGATGTGGCTTGGTACCAACAGAAGCCAGG
                                                                                                                                                                                                                                                                                     GGGTAACTACGGCTATGCTTTGGACTACTGGGGTCAAGGAACCTCAGTCACCGTCTCC
                                                                                                                                                                                                                                                                                                                           CTTAAAAATGAACAGTCTGCAAACTGATGACACAGCCATGTACTACTGTGCCAGTCGGGG 653
                                                                                                                                                                                                                                                                                                                                                                                                       TAATTCGGCTCTTATGTCCAGACTGAGCATCAGCAAGGACAACTCCAAGAGCCAAGTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGCTGGTGGAAGCACAAATTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CATCACTTGCACTGTCTCTGGGTTTTCATTAACCAATTATGGTGTACACTGGGTTCGCCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATCGCAGGTGCAGGTGAAGGAGTCAGGACCTGGCCTGGTGGCGCCCTCACAGAGCCCTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GACCAAGCTGGAAATAAAAGGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGACTTGGCAGAGTATTTCTGTCAGCAATATAACAGCTATCCGCTCACGTTCGGTGCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGACCTGGCAGTTTATTTCTGTCAGCAGGATTATAGCT------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTTCACAGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAATGTGCAGTCTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTTCACTGGCAGTGGATATGGGACGGATTTCACTTTCACCATCAGCACTGTGCAGGCTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCAATCTCCTAAAGCACTGATTTACTCGGCATCCTACCGGTACAGTGGAGTCCCTGATCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GCAGTCTCCGAAACTGCTGATATACTCTGCATCCAATCGCTACACTGGAGTCCCTGATCG
                                                                                                                                                                                                                                                                                                                                                                                 TAATGCAGCTTTCATATCCAGACTGAGCATCAGCAAGGACAATTCCAAGAGCCAAGTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                       GTCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTGATATGGAGTGGTGGAAGCACAGACTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CATCACCTGCACAGTCTCTGGTTTCTCATTAACTAGCTATGGTACACTGGGTTCGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TTCTCAGGTGAAACTGCAGGAGTCAGGACCTGGCCTAGTGCAGCCCTCACAGAGCCTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TATCCAGCTGACCCAGTCTCAAAAATTCATGTCCACATCAGTAGGAGACAGGGTCAGCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                        30
                                                                                           Eutheria;
                                                               Zettl, F., Dreier, T.,
                                                                                                                                                                                                                                                                         AGAACTGGTCGTTTGCTTACTGGGGCCAAGGGACCACGGTCACCGTCTCC
                                                                                                                                                                                        from
                                                                                                                                                               GI:10183771
                                                                                                                                    (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            66.9%;
81.5%;
                                                                                                                                                                                       Patent
                                                                                          Chordata; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ٥.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 478; DB 6; 1
Pred. No. 4.8e-116;
0; Mismatches 115;
                                                                                                                                                                                        1371 bp
WO0006605.
                                                                                        Craniata; Vertebrata;
Catarrhini; Hominidae
                                                                  Baeuerle, P.A.
                                                                                                                                                                                                      DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 1371;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                      linear
                                                                   and
              TORSTEN (DE)
) ; MICROMET
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -CGCTCGGAGGGGG
                                                                   Borschert,
                                                                                                         Euteleostomi;
                                                                                                                                                                                                      PAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  18;
                                                                                                                                                                                                      15-SEP-2000
                GES
                                                                                                                                                                                                                                                                                                                                                                                                            593
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     473
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        188
               FUER
                                                                                                                                                                                                                                                                                                                                                                                  899
                                                                                                                                                                                                                                                                                                                                                                                                                                        809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                533
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                488
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  248
               В
                                5
                                                            밁
                                                                                   S
                                                                                                             밁
                                                                                                                                        ઈ
                                                                                                                                                                          맑
                                                                                                                                                                                              á
                                                                                                                                                                                                                         망
                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                              문
                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 66.9%;
Best Local Similarity 81.5%;
Matches 585; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         189
                                          654
                                                                                              594
                                                                                                                       609
                                                                                                                                               534
                                                                                                                                                                            549
                                                                                                                                                                                                      474
                                                                                                                                                                                                                                489
                                                                                                                                                                                                                                                          414
                                                                                                                                                                                                                                                                                     429
                                                                                                                                                                                                                                                                                                             354
                                                                                                                                                                                                                                                                                                                                           369
                                                                                                                                                                                                                                                                                                                                                                   294
                                                                                                                                                                                                                                                                                                                                                                                              309
                                                                                                                                                                                                                                                                                                                                                                                                                        243
                                                                                                                                                                                                                                                                                                                                                                                                                                                   249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           w
                                                                                                                                                                                                                                                                                    GCAGTCTCCGAAACTGCTGATATACTCTGCATCCAATCGCTACACTGGAGTCCCTGATCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGCTGGTGGAAGCACAAATTA
                                                                                                                                                                                                                                                                                                                                                         GACCAAGCTGGAAATAAAAGGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCGG
                                                                                                                                                                                                                                                                                                                                                                                                               AGACCTGGCAGTTTATTTCTGTCAGCAGGATTATAGCT-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTTCACTGGCAGTGGATATGGGACGGATTTCACTTTCACCATCAGCACTGTGCAGGCTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CACCTGCAAGGCCAGTCAGAATGTGGGTACTAATGTAGCCTGGTATCAACAGAAACCAGG
                               GGGTAACTACGGCTATGCTTTGGACTACTGGGGGTCAAGGAACCTCAGTCACCGTCTCC 711
                                                                                   CTTAAAAATGAACAGTCTGCAAACTGATGACACAGCCATGTACTACTGTGCCAGTCGGGG
                                                                                                                                       TAATTCGGCTCTTATGTCCAGACTGAGCATCAGCAAGGACAACTCCAAGAGCCAAGTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AACCTGCAAGGCCAGTCAGAGTGTGAGTAATGATGTGGCTTGGTACCAACAGAAGCCAGG
                                                                                                                         TAATGCAGCTTTCATATCCAGACTGAGCATCAGCAAGGACAATTCCAAGAGCCAAGTTTT
                                                                                                                                                                             GTCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTGATATGGAGTGGTGGAAGCACAGACTA
                                                                                                                                                                                                                                                                                                                                           AGACTTGGCAGAGTATTTCTGTCAGCAATATAACAGCTATCCGCTCACGTTCGGTGCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTTCACAGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAATGTGCAGTCTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GCAATCTCCTAAAGCACTGATTTACTCGGCATCCTACCGGTACAGTGGAGTCCCTGATCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /codon_start=1
/proteIn_id="CAC08832.1"
/proteIn_id="CAC08832.1"
/db_xref="G1:10183772"
/db_xref="G1:10183772"
/db_xref="G1:10183772"
/db_xref="G1:10183772"
/translation="McWSCIILFLVATATGVHSDIQLTQSQKFMSTSVGDRVSVTCKA
SQNVGTNVAMYQQKPGQSPKALIYSASYRYSGVPDRFTGSGSGTDFTLTISNVQSEDL
AEYFCQQYNSYPLTFCAGTKLBIKGGGGSGGGGSGVKLQDSGPGLVQPSQSLS
ITCTVSGFSLTSYGVHWVRQSPGKGLEMIGVIWSGGSTDYNAAFISRLSISKDISKSQ
VFFKMSLQANDTAIYYCARMENWSFAXWGQGTTVTVSEFPKPSTTPGGSGGLEELLK
HLKELLKGPRKGELEELKHLKELLKGGSGGAPAPTSSSTKKTQLQLEHLLLDLQMIL
NGINNYKNPKLTRMLTFKFYMPKKATELKHLQCLEEELKPLEEVLNLAQSKNFHLRPR
DLISNINVIVLELKGSETTFMCEYADETATIVEFLNRMITFCQSIISTLTDVHHHHHHH
"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /organism="Homo sapiens"
/mol_type="unassigned DN
/db_xref="taxon:9606"
10.__1362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        'note="unnamed
                AGAACTGGTCG'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 478; DB 6; I
Pred. No. 4.8e-116;
0; Mismatches 115;
                  TTTGCTTACTGGGGCCAAGGGACCACGGTCACCGTCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       product"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                          -cecreeeeee
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                  777
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   128
```

1.22

62 2

```
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 5
BD222936
   밁
                              Ş
                                                                밁
                                                                                                S
                                                                                                                                      밁
                                                                                                                                                               δ
                                                                                                                                                                                                      В
                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                  맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                rocus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Patent: JP 2002521053-A 30 16-JUL-2002;

MICROMET AG

OS Homo sapiens (human)

OS Mus muscullus (mouse)

PN JP 2002521053-A/30

PD 16-JUL-1999 JP 2000562401

PR 28-JUL-1999 BP 98114082.5

PI PETER KUFER, TORSTEN DREIER, PATRICK A

BORSCHERT,

PI FLORIAN ZETTL

PC C12N15/09, A61K35/76, A61K38/00, A61K38/

PC C12N5/10, C12P21/02, G01N33/53, G01N33/5

PC (C12N5/10, C12P21/02, G01N33/53, G01N33/5

PC (C12N5/00, C12R1:91)

CC (Heterominibodies

FH Key (10)...(1377).
                                  354
                                                                  369
                                                                                                    294
                                                                                                                                      309
                                                                                                                                                                      243
                                                                                                                                                                                                          249
                                                                                                                                                                                                                                          183
                                                                                                                                                                                                                                                                              189
   429
                                                                                                                                                                                                                                                                                                              123
                                                                                                                                                                                                                                                                                                                                                  129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      585;
                                                                                                                                                                                                                                                                                                                                                                                63
                                                                                                                                                                                                                                                                                                                                                                                                                  69
                                                                                                                                                                                                                                                                                                                                                                                                                                                    w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BD222936
BD222936.1 GI:33032706
JP 2002521053-A/30.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 (bases 1 to 1389)
Kufer,P., Dreier,T., Baeuerle,P.A., Borschert,K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens (human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Heterominibodies.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Heterominibodies
                                                                                                                                                                                                                                                                                                                                                                  AACCTGCAAGGCCAGTCAGAGTGTGAGTAATGATGTGGCTTTGGTACCAACAGAAGCCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                        TATTGTGATGACCCAGACTCCCAAATTCCTGCTTGTATCAGCAGGAGACAGGGTTACCAT
                                                                                              GACCAAGCTGGAAATAAAAGGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCGG
                                                                                                                                      AGACTTGGCAGAGTATTTCTGTCAGCAATATAACAGCTATCCGCTCACGTTCGGTGCTGG
                                                                                                                                                                                                        CTTCACAGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAATGTGCAGTCTGA
                                                                                                                                                                                                                                                                          GCAATCTCCTAAAGCACTGATTTACTCGGCATCCTACCGGTACAGTGGAGTCCCTGATCG
                                                                                                                                                                                                                                                                                                            GCAGTCTCCGAAACTGCTGATATACTCTGCATCCAATCGCTACACTGGAGTCCCTGATCG
                                                                                                                                                                                                                                                                                                                                                CACCTGCAAGGCCAGTCAGAATGTGGGTACTAATGTAGCCTGGTATCAACAGAAACCAGG
TTCTCAGGTGAAACTGCAGGAGTCAGGACCTGGCCTAGTGCAGCCCTCACAGAGCCTGTC
                       ATCGCAGGTGCAGGTGAAGGAGTCAGGACCTGGCCTGGTGGCGCCCTCACAGAGCCTGTC
                                                                  AGACCTGGCAGTTTATTTCTGTCAGCAGGATTATAGCT------
                                                                                                                                                                                                                                            CTTCACTGGCAGTGGATATGGGACGGATTTCACTTTCACCATCAGCACTGTGCAGGCTGA
                                                                                                                                                                                                                                                                                                                                                                                                                TATCCAGCTGACCCAGTCTCAAAAATTCATGTCCACATCAGTAGGAGACAGGGTCAGCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FLORIAN ZETTL
C12N15/09,A61K35/76,A61K38/00,A61K38/21,A61P35/00,A61P35/02,
C07K19/00,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          C12N5/10,C12P21/02,G01N33/53,G01N33/53/(C12N5/10,C12R1:91), (C12P21/02,C12R1:91),C12N15/00,C12N5/00,A61K37/02,A61K37/66, (C12N5/00,C12R1:91)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            28-JUL-1999 JP 2000562401
28-JUL-1998 EP 98114082.5
PETER KUPER,TORSTEN DREIER,PATRICK A BAEUERLE,KATRIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /organism="Homo sapiens"
/mol_type="genomic DNA"
/db_xref="taxon:9606"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers (10). (1377).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .1389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   66.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ٥,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 478; DB 6;
Pred. No. 4.8e-116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches 115;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                å
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 1389;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          and
                                                                                                                                                                      CGCTCGGAGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PAT 17-JUL-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                413
                                                                                                  353
                                                                                                                                    368
                                                                                                                                                                      293
                                                                                                                                                                                                                                          242
                                                                                                                                                                                                                                                                                                            182
                                                                                                                                                                                                                                                                                                                                                                                122
                                                                                                                                                                                                                                                                                                                                                                                                                  128
488
                                                                428
                                                                                                                                                                                                          308
                                                                                                                                                                                                                                                                            248
                                                                                                                                                                                                                                                                                                                                              188
                                                                                                                                                                                                                                                                                                                                                                                                                                                   62
```

```
AX023361
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                맑
                                                            á
                                                                                                    В
S
                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                            ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                          Query Match
Best Local
                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           source
 123
                                   129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                534
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      489
                                                                  63 AACCTGCAAGGCCAGTCAGAGTGTGAGTAATGATGTGGCTTGGTACCAACAGAAGCCAGG
                                                                                                      69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AX023361
Sequence
AX023361
                                                                                                                                      ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PATENT: WO 0006605-A 32 10-FEB-2000;
KUPER PETER (DE); ZETTL FLORIAN (DE)
BAEUERLE PATRICK A (DE); BORSCHERT KA
BIOMEDIZINIS (DE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; I
Mammalia; Eutheria; Primates; Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Heterominibodies
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Kufer, P., Zettl, F., Dreier, T., Baeuerle, P.A. and Borschert, K
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AX023361.1
                                                                                                                                                                                          Similarity
 GCAGTCTCCGAAACTGCTGATATACTCTGCATCCAATCGCTACACTGGAGTCCCTGATCG
                                                                                                    TATCCAGCTGACCCAGTCTCAAAAATTCATGTCCACATCAGTAGGAGACAGGGTCAGCGT
                                                                                                                         TATTGTGATGACCCAGACTCCCAAATTCCTGCTTGTATCAGCAGGAGACACGGGTTACCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGGTAACTACGGCTATGCTTTGGACTACTGGGGTCAAGGGAACCTCAGTCACCGTCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTTAAAAATGAACAGTCTGCAAACTGATGACACAGCCATGTACTACTGTGCCAGTCGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TAATGCAGCTTTCATATCCAGACTGAGCATCAGCAAGGACAATTCCAAGAGCCAAGTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TAATTCGGCTCTTATGTCCAGACTGAGCATCAGCAAGGACAACTCCAAGAGCCAAGTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGCTGGTGGAAGCACAAATTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CATCACCTGCACAGTCTCTGGTTTCTCATTAACTAGCTATGGTGTACACTGGGTTCGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CATCACTTGCACTGTCTCTGGGTTTTCATTAACCAATTATGGTGTACACTGGGTTCGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTTTAAAATGAACAGTCTGCAAGCTAATGACACAGCCATATATTACTGTGCCAGAATGG-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GTCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTGATATGGAGTGGTGGAAGCACAGACTA
                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                         /protein_id="CaC08833.1"
/protein_id="CaC08833.1"
/db_xref="GI:10183774"
/db_xref="GI:10183774"
/translation="MGMSCIIIFLVATATGVHSDIQLTQSQKEMSTSVGDRVSVTCKA
SQNVGTNVAMYQQKEGQSFKALIYSASYRYSGVPDRETGSGSGTDFTLTISNVQSEDL
AEYFCQQYNSYPLTFGAGTKLEIKGGGGSGGGSGQVKLQESGPGLVQPSQSLS
ITCTVSGFSLTSYGVHVRQSBGKGLEMLGVLWSGGSTDYNAFISRLSISKNNSKSQ
VFFKMNSLQANDTAIYCARMEMSFAYMSKGCTTTVTVSETPAAFISRLSISKDGEY
ETLQIRGEREREMFERLMEALELMSAGAGKEPGSGGAPAPTSSSTKKTQLQLEHLLL
DLQMILNGINNYKNPKLTRMLTFKFYMPKKATELKHLQCLEEELKPLEEVLNLAQSKN
FHLRPRDLISNINVIVLELKGSETTFMCEYADETATIVEFLNRMITFCQSIISTLTDV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /mol_type="unassigned
/db_xref="taxon:9606"
10._.1380
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       32 from Patent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -AGAACTGGTCGTTTGCTTACTGGGGCCAAGGGACCACGGTCACCGTCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /organism="Homo sapiens"
/mol_type="unassigned DNJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                   codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     note="unnamed protein product"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1. .1389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GI:10183773
                                                                                                                                                                                     66.9%;
81.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (human)
                                                                                                                                                                   Score 478; DB o, -
Pred. No. 4.8e-116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1389 bp
WO0006605
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              KATRIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DREIER TORSTEN (DE) RIN (DE) ; MICROMET
                                                                                                                                                                                                          Length 1389;
                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       linear
                                                                                                                                                                        18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       15-SEP-2000
                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               777
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             711
   182
                                                                     122
                                                                                                                                        62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FUER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      608
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    533
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        548
                                   188
                                                                                                        128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               653
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    593
```

2

```
RESULT 7
CQ856167
LOCUS
DEFINITION
ACCESSION
VERSION
                                                                                                                                                                                                           REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ક
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
             ફ
                                  밁
                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  문
                                                                                                                       ORIGIN
                                                                                                                                                                                      FEATURES
                                                                                                                                                                                                                                                                                      KEYWORDS
                                                                            Query Match
Best Local Similarity
Matches 584; Conserv
                                                                                                                                                                            source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               534
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  243
                                                                                                                                                                                                                                                                                                                                                                                     728
                                                                                                                                                                                                                                                                                                                                                                                                          654
                                                                                                                                                                                                                                                                                                                                                                                                                                                    594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  189
             63
                                                                                                                                                                                                                                                                                                CQ856167
Sequence 19 1
CQ856167
CQ856167.1 (
                                   w
                                                      w
                                                                                                                                                                                                            Enduring t
Patent: WO
                                                                                                                                                                                                                                                                synthetic construct
synthetic construct
                                                                                                                                                                                                  Micromet
                                                                                                                                                                                                                              Kischel, R., Kufer, P., Lutterbuese, R., Offner, S.
AACCTGCAAGGCCAGTCAGAGTGTGAGTAATGATGTGGCTTGGTACCAACAGAAGCCAGG
                                                                                                                                                                                                                                                                                                                                                                                                  GGGTAACTACGGCTATGCTTTGGACTACTGGGGTCAAGGAACCTCAGTCACCGTCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                           CTTAAAAATGAACAGTCTGCAAACTGATGACACAGCCATGTACTACTGTGCCAGTCGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TAATTCGGCTCTTATGTCCAGACTGAGCATCAGCAAGGACAACTCCCAAGAGCCAAGTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CATCACTTGCACTGTCTCTGGGTTTTCATTAACCAATTATGGTGTACACTGGGTTCGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATCGCAGGTGCAGGTGAAGGAGTCAGGACCTGGCCTGGTGGCGCCCTCACAGAGCCTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GACCAAGCTGGAAATAAAAGGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTTCACTGGCAGTGGATATGGGACGGATTTCACTTTCACCATCAGCACTGTGCAGGCTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TATTGTGATGACCCAGACTCCCAAATTCCTGCTTGTATCAGCAGGAGACAGGGGTTACCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TRATGCAGCTTTCATATCCAGACTGAGCATCAGCAAGGACAATTCCAAGAGCCAAGTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GTCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTGATATGGAGTGGTGGAAGCACAGACTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CATCACCTGCACAGTCTCTGGTTTCTCATTAACTAGCTATGGTGTACACTGGGTTCGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TTCTCAGGTGAAACTGCAGGAGTCAGGACCTGGCCTAGTGCAGCCCTCACAGAGCCTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGACCTGGCAGTTTATTTCTGTCAGCAGGATTATAGCT-----CGCTCGGAGGGGG
                                                                                                                                                                                                                                                                                                                                                                                     ----AGAACTGGTCGTTTGCTTACTGGGGCCAAGGGACCACGGTCACCGTCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                 CTTTAAAATGAACAGTCTGCAAGCTAATGACACAGCCATATATTACTGTGCCAGAATGG-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGACTTGGCAGAGTATTTCTGTCAGCAATATAACAGCTATCCGCTCACGTTCGGTGCTGG
                                                                            66.6%;
ilarity 81.1%;
Conservative
                                                                                                                                                                                                                                                     sequences; artificial sequences
                                                                                                                                                                                                          t cell response
WO 2004069876-A 19 19-AUG-2004;
                                                                                                                                                                                                  AG (DE)
                                                                                                                                 /organism="synthetic construct"
/mol type="unassigned DNA"
/mb xref="taxon:32630"
/noEe="scFv antiEpCAM-hu4-1BBL nucleic
                                                                                                                                                                             1. .1380
                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                 GI:51850992
                                                                                                                                                                                                                                                                                                                      from Patent
                                                                            ; Score 475.2; 1; Pred. No. 2.7e. 0; Mismatches
                                                                                                                                                                                                                                                                                                                      1380 bp DNA
WO2004069876.
                                                                            2; DB 6;
2.7e-115;
les 118;
                                                                              Indels
                                                                                                 Length 1380
                                                                                                                                                                                                                                                                                                                                  linear
                                                                                                                                  acid
                                                                                                                                                                                                                                  and Wolf, A.
                                                                              18;
                                                                                                                                                                                                                                                                                                                                  PAT 31-AUG-2004
                                                                                                                                  sequence'
                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                593
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     473
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           488
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               368
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               242
                                   62
                                                        62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   248
              122
                                                                              Ν
                                                                                        JOURNAL
REFERENCE
AUTHORS
TITLE
                                                                                                                                                       REFERENCE
AUTHORS
                                                                                                                                                                                                  SOURCE
ORGANISM
                                                                                                                                                                                                                                                       ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                RESULT 8
MUSVKLI
LOCUS
                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                 ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                             á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ક
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            문
                                                                                                                                                                                                                                                                                                                                                       밁
             FEATURES
                                                        COMMENT
                                                                                                                                                                                                                                             KEYWORDS
                                                                                                                                                                                                                                                                                       DEFINITION
                                                                                                                                  TITLE
                                                                    JOURNAL
    Bource
                                                                                                                                                                                                                                                                                                                                                                                                 603
                                                                                                                                                                                                                                                                                                                                                                                                                     594
                                                                                                                                                                                                                                                                                                                                                                                                                                          543
                                                                                                                                                                                                                                                                                                                                                                                                                                                               534
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         123
                                                                                                                                                                                                                                                                                                                                                      662
                                                                                                                                                                                                                                                                                                                                                                           654
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                354
                                                                                                                 1 (bases 1 to 738)
Suckling, C.J., Stimson, W.H., Proctor, G.R., Khalaf, A.L. and Tedford, C.M.
Catalytic Antibodies - Designed and Acciden J. Change 1 to 730
                                                                                                                                                                                                                             L41689.1 GI:1119223
Diels-Alder reaction; Ig heavy chain variable region;
light chain; Ig light chain variable region; antigen!
```

```
63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCAGTCTCCGAAACTGCTGATATACTCTGCATCCAATCGCTACACTGGAGTCCCTGATCG
                                                                                                                                                                                                                    TAATTCGGCTCTTATGTCCAGACTGAGCATCAGCAAGGACAACTCCAAGAGCCAAGTTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CACCTGCAAGGCCAGTCAGAATGTGGGTACTAATGTAGCCTGGTATCAACAGAAACCAGG
                                                                                                                     CTTAAAAATGAACAGTCTGCAAACTGATGACACAGCCATGTACTACTGTGCCAGTCGGGG
                                                                                                                                                                                                                                                                                GTCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTGATATGGAGTGGTGGAAGCACAGACTA
                                                                                                                                                                                                                                                                                                              GCCTCCAGGAAAGGGTCTGGAGTGGCTGGGGGGTAATATGGGCTGGTGGAAGCACAAATTA
                                                                                                                                                                                                                                                                                                                                                                                    CATCACCTGCACAGTCTCTGGTTTCTCATTAACTAGCTATGGTGTACACTGGGTTCGCCA
                                                                                                                                                                                                                                                                                                                                                                                                             CATCACTTGCACTGTCTCTGGGTTTTCATTAACCAATTATGGTGTACACTGGGTTCGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TTCTGATATCAAGCTGCAGGAGTCTGGACCTGGCCTAGTGCAGCCCTCACAGAGCCTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATCGCAGGTGCAGGTGAAGGAGTCAGGACCTGGCCTGGTGGCGCCCTCACAGAGCCTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GACCAAGCTGGAAATAAAAGGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGACCTGGCAGTTTATTTCTGTCAGCAGGATTATAGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTTCACTGGCAGTGGATATGGGACGGATTTCACTTTCACCATCAGCACTGTGCAGGCTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCAATCTCCTAAAGCACTGATTTACTCGGCATCCTACCGGTACAGTGGAGTCCCTGATCG
                                          GGGTAACTACGGCTATGCTTTGGACTACTGGGGTCAAGGAACCTCAGTCACCGTCTCCTC
                                                                                          CTTTAAAATGAACAGTCTGCAAGCTAATGACACAGCCATATATTACTGTGCCAGAATGG-
                                                                                                                                                                                      TAATGCAGCTTTCATATCCAGACTGAGCATCAGCAAGGACAATTCCAAGAGCCAAGTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGACTTGGCAGAGTATTTCTGTCAGCAATATAACAGCTATCCGCTCACGTTCGGTGCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CTTCACAGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAATGTGCAGTCTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -----CGCTCGGAGGGGG
713
                                             713
                                                                                               661
                                                                                                                                         653
                                                                                                                                                                                         602
                                                                                                                                                                                                                                        593
                                                                                                                                                                                                                                                                                     542
                                                                                                                                                                                                                                                                                                                                     533
                                                                                                                                                                                                                                                                                                                                                                                       482
                                                                                                                                                                                                                                                                                                                                                                                                                                    473
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     182
```

MUSVKLI
738 bp DNA linear ROD 14-DEC-1995
Mus musculus (clone H11) Ig kappa light chain V region (Vk), Ig
heavy chain V region (Vh), and single chain FV gene.

; Ig ]

kappa ; catalytic

antibody; immunoglobulin. Mus musculus musculus (eastern European house mouse) Mus musculus musculus Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Rodentia; Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus

Biochem. Soc. Trans. 24, 313 (1996)
Original source text: Mus musculus (strain NZB x BALB/c, sub species musculus) (clone: H11) male adult splenocyte single chain Fv constructed from an IgG1 antibody which pown to catalyse a Diels Alder Cycloaddition reaction. 2 (bases 1 to 738) Brooke, L., Suckling, C.J. and Stimson, W.H. Construction of a single chain Fv from an Diels Alder reaction antibody catalysing

DNA

ø

been

8h

Accidental 2777-2780

(1993)

Bence, L.H.,

Location/Qualifiers

```
ORIGIN
                                                                                                                                                                                                                                                                                                             Query Match
Best Local S
Matches 580
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        gene
                                                                                                                                                                                                                                                                                                                                                                                                                                            V_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  V_region
                                173
                                                                     134
                                                                                                          113
                                                                                                                                                                                                                                                                                                             580;
                                                                                                                                                   74
                                                                                                                                                                                        71
                                                                                                                                                                                                                               14
                                                                                                                                                                                                                                                                        11
                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                       TGACCCAGACTCCCAAATTCCTGCTTGTATCAGCAGGAGACAGGGTTACCATAACCTGCA
      TCCCTGATCGCTTCACTGGCAGTGGATATGGGACGGATTTCACTTTCACCATCAGCACTG
                                                                                          AGAAGCCAGGGCAGTCTCCGAAACTGCTGATATACTCTGCATCCAATCGCTACACTGGAG
                                                                                                                                                                                        AGGCCAGTCAGAGTGT-----
                                                                                                                                                                                                                             TGACCCAGTCTCCATCATCTCTGGCTGTGTCTGCAGGAGAAAAGGTCACTATGAGCTGTA
                                                                                                                                                 AGTCCAGTCAAAGTGTTTTATACAGTTCAAATCAGAAGAACTACTTGGCCTGGTACCAGC
                                                                   AGAAACCAGGGCAGTCTCCTAAGCTGCTGATCTACTGGGCATCCACTAGGGAATCTGGTG
                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                /gene="Vh"
391. .732
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /gene="Vk"
/note="This CDS feature is included to show the
/note="This CDS feature is included to show the
/ranslation of the corresponding V region. Presently
translation qualifiers on V_region_features are illegal."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /protein_id="AAA83382.1"
/db_xref="GI:1119255"
/db_xref="GI:1119255"
/translation="MDIQUIQSPSSLAVSAGEKVIMSCKSSQSVLYSSNQKNYLAWYQ
/translation="MDIQUIQSPSSLAVSAGEKVIMSCKSSQSVLYSSNQKNYLAWYQ
QKEQQSPKLLIYWASTREEGYVDRFTGSGSGTDFTLTISSVQAEDLAVYYCHQYLSHT
PGGGTKLEIKRVDGGGGSGGGGSGGGGSEVQLQESGPGLVAPSQSLSITCTVSGPSLT
GYGYNWVRQPPGKGLEWLGMIWGDGNTDYNSALKSRLSISKDNSKSQVFLKYNNSLHTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    346.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /proteIn id="AAA83381.1"
/db_xref="GI:1119224"
/translation="MDIQLTQSPSSLAVSAGEKVTMSCKSSQSVLYSSNQKNYLAWYQ
QKPGQSPKLLIYWASTRESGVPDRFTGSGSGTDFTLTISSVQAEDLAVYYCHQYLSHT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DTARYYCARERDYRLDYWGQGTTVTV"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note="This CDS feature is included to show the translation of the corresponding V_region. Presently translation qualifiers on V_region features are illegal."
                                                                                                                                                                                                                                                                                                                                                                                               /gene="Vh"
/product="Ig heavy chain variable region"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /product="kappa light chain variable region"
/standard_name="H11 light chain variable region"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FGGGTKLEIKRVD"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1. .345
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /product="single chain Fv"
/standard name="Vk linker VH"
/note="linked by a flexible bridging
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /mol_type="genomic DNA"
/strain="NZB x BALB/c"
/sub_species="musculus"
/db_xref="taxon:39442"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /cell_line="B cell/myeloma
/cell_type="hybridoma"
/tissue_type="splenocyte"
/dev_stage="adult"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  note="(GGGGS)3 linker;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gene="Vk"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    'gene="Vk"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /sex="male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            organism="Mus musculus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         function="linker"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                codon_start=1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              clone="H11"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .390
                                                                                                                                                                                                                                                                                                                             60.5%;
79.0%;
                                                                                                                                                                                                                                                                                                           <u>,</u>
                                                                                                                                                                                                                                                                                                         Score 432; DB 10;
Pred. No. 8.6e-104;
0; Mismatches 115;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  15
                                                                                                                                                                            -GAGTAATGATGTGGCTTGGTACCAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  amino
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       X63
                                                                                                                                                                                                                                                                                                                                               Length 738;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              acid flexible peptide
                                                                                                                                                                                                                                                                                                         Indels 39;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         sequence"
                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                          172
                                                                                                                                               133
                                                                                                                                                                                                                           73
                                                                   193
                                                                                                                                                                                    112
                                                                                                                                                                                                                                                                  70
                                                                                                                                                                                                                                                                                    TITLE
JOURNAL
MEDLINE
PUBMED
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 9
MMZ95476
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         吊
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               á
                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                               TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                             AUTHORS
                                                                   CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            725
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           581
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                401
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          290
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               254 TACAAGCTGAAGACCTGGCAGTTTATTACTGTCATCAATACCTCTCCCACACGTTCGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          194 TCCCTGATCGCTTCACAGGCAGTGGATCTGGGACAGATTTTACTCTTACCATCAGCAGTG
                                                                                                                                                                                                                       Direct Submission
Submitted (07-MAY-1997) Dept.
Agricultural University, P.O.
                                                                                                                                                                                                                                                                                                                                               98010486
                                                                                                                                                                                                                                                                                                                                                              Schouten,A., Roosien,J., de Boer,J.M., Wilmink,A., Rosso,M.N., Bosch,D., Stiekema,W.J., Gommers,F.J., Bakker,J. and Schots,A. Improving scFv antibody expression levels in the plant cytosol PEBS Lett. 415 (2), 235-241 (1997)
                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; E
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae;
1 (bases 1 to 840)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Z95476 AF004403
                                                                                                                                                                                                                                                                                        Schouten,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Z95476.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mus musculus mRNA for IgM/kappa antibody,
                                                                                                                                                                                                                                                                                                                               9351003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TCACCGTCTGATCA 738
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCACCGTCTCCTCA 714
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GTGCCAGTCGGGGGGGTAACTACGGCTATGCTTTGGACTACTGGGGTCAAGGAACCTCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGAGCCAAGTTTTCTTAAAAATGAACAGTCTGCAAACTGATGACACAGCCATGTACTACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GAAACACAGACTATAATTCAGCTCTCAAATCCAGACTGAGCATCAGCAAGGACAACTCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GAAGCACAAATTATAATTCGGCTCTTATGTCCAGACTGAGCATCAGCAAGGACAACTCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACTGGGTTCGCCAGCCTCCAGGAAAGGGTCTGGAATGGCTGGGAATGATTTGGGGTGATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACTGGGTTCGCCAGCCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGCTGGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CACAGAGCCTGTCCATCACATGCACCGTCTCAGGGTTCTCATTAACCGGCTATGGTGTAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CACAGAGCCTGTCCATTACCACTTGCACTGTCTCTGGGTTTTCATTAACCAATTATGGTGTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCGGCGGTGGCGGTTCTGAAGTGCAGCTTCAGGAGTCAGGACCTGGCCTGGTGGCGCCCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTGGCGGTGGCGGATCGCAGGTGCAGGTGAAGGAGTCAGGACCTGGCCTGGTGGCGCCCCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGGGGACCAAGCTGGAGATCAAACGTGTCGACGGCGGTGGCGGATCTGGTGGCGGTGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGGGGACCAAGCTGGAAATAAAA-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TGCAGGCTGAAGACCTGGCAGTTTATTTCTGTCAGCAGGA---TTATAGCTCGCTCGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGAGCCAAGTTTTCTTAAAAATGAACAGTCTGCACACTGATGACAGCCAGGTACTACT
                                                                                                                                                                                                                                                                                                      (bases 1 to 840)
/codon_start=1
/product="IGM/Rappa antibody"
/protein_id="CAB08854.1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GI:2108308
                                                                                                                                                                                    Location/Qualifiers
                                                                                   /db_xref="taxon:10090"
/note="recombinant gen
                                                                                                                          organism="Mus musculus"
/mol_type="mRNA"
                                                                   .840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        rataggettgáctactggggecaagggaccacgg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          đđ
                                                                                                                                                                                                                       of Nematology, Wageningen
Box 8123, Wageningen 6700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGTGGAGGCGGTTCAGGCGGAGGTGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         linear F
scFvGUS-CK.
```

Euteleostomi;
; Murinae; Mus

ES,

The

ROD

29-OCT-1997

700

673 640 613 580 553 520

724

493 460 433 400 373 340 313

Ş

밁 Ş 밁 Ś

Ş B

£3

```
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local S
Matches 563
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   misc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    misc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  _feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                _feature
                                                                                                                             517
  682
                         637
                                                   622
                                                                             577
                                                                                                       562
                                                                                                                                                          502
                                                                                                                                                                                   457
                                                                                                                                                                                                            442
                                                                                                                                                                                                                                      397
                                                                                                                                                                                                                                                                382
                                                                                                                                                                                                                                                                                         340
                                                                                                                                                                                                                                                                                                                   322
                                                                                                                                                                                                                                                                                                                                              284
                                                                                                                                                                                                                                                                                                                                                                       262
                                                                                                                                                                                                                                                                                                                                                                                                 226
                                                                                                                                                                                                                                                                                                                                                                                                                         202
                                                                                                                                                                                                                                                                                                                                                                                                                                                   166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        563;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
                                                   TCCAAGAGCCAAGTTTTCTTAAAAATGAACAGTCTGCAAACTGATGACACAGCCATGTAC
                                                                                                                    GGTGGAAGCACAAATTATAATTCGGCTCTTATGTCCAGACTGAGCATCAGCAAGGACAAC
                                                                                                                                                                        GTACACTGGGTTCGCCAGCCTCCAGGAAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGCT
                                                                                                                                                                                                                            CGCTCACAGAGCCTGTCCATCACTTGCACTGTCTCTGGGTTTTCATTAACCAATTATGGT
                                                                                                                                                                                                                                                                              TCTG----GCGGTGGCGGATCGCAGGTGCAGGTGAAGGAGTCAGGACCTGGCCTGGTGGCG
                                                                                                                                                                                                                                                                                                                                                                                                                                        ACTGGAGTCCCTGATCGCTTCACTGGCAGTGGATATGGGACGGATTTCACTTTCACCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TACCAACAGAAGCCAGGGCAGTCTCCGAAACTGCTGATATACTCTGCATCCAATCGCTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATTGTGATGACCCAGACTCCCAAATTCCTGCTTGTATCAGCAGGAGACAGGGTTACCATA
  TACTGTGCCAAAAATTACTATGGTAACTACGGGGCTATGGACTACTGGGGTCAAGGAACC
                                                                                                                                                          GTACACTGGGTTCGCCAGTCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTGATATGGAGA
                                                                                                                                                                                                              CCCTCACAGAGCCTGTCCATAACCTGCACAGTCTCTGGTTTCTCATTAACTAGCTATGGT
                                                                                                                                                                                                                                                                TCCGAATCCAAACTCGAGTCTGAGGTGAACCTGGTGGAATCTGGACCTGGCCTAGTGCAG
                                                                                                                                                                                                                                                                                                                   ACGTTCGGTGCGGGACCAAGCTGGAAATAAAACGGGAGGGTAAATCCTCAGGATCTGGC
                                                                                                                                                                                                                                                                                                                                  ----TCGGAGGGGGGACCAAGCTGGAAATAAAAGGTGGAGGCGGTTCAGGCGGAGGTGGC
                                                                                                                                                                                                                                                                                                                                                                                      AGCACTGTGCAGGCTGAAGACCTGGCAGTTTATTTCTGTCAGCAGGATTATAGCTCGC--
                                                                                                                                                                                                                                                                                                                                                                                                                           rccegrercccrearcectricacaegeaeregeaeregeaereaearrrracrerraccare
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TACCAGCAGAAACCAGGCAGTCTCCTAAACTGCTGATCTACTGGGCTTCCACTAGGGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCTGCAAGGCCAGTCAGAGTGT------GAGTAATGATGTGGCTTGG
                   TACTGTGCCAGTCGGGGGGTAACTACGGCTATGCTTTGGACTACTGGGGTCAAGGAACC
                                                                                                      GGTGGAAGCACAGACTACAATGCAGCTTTCATGTCCAGACTGAGCATCACCAAGGACAAC
                                                                                                                                                                                                                                                                                                                                                                       AGCAGTGTACAAGCTGAAGACCTGGCAGTTTATTACTGTCATCAATACCTCTCCTCGCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATCCAGATGACACAGTCTCCCCCATCTCTGGCTGTGTCTGCAGGAGAAAAGGTCACTATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note="Heavy chain f
coding sequence"
787. 819
/note="c-myc tag cod
826. 837
/note="KDEL coding &
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note="Light chain var
355..402
/note="Linker peptide
403..759
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /translation="MAQVDGDIQMTQSPPSLAVSAGEKVTMSCKSSQSVLYSSNQKNY LAWYQQKFGGSFKLLIWAGKSTRESGVDFRFTGSGSGFDFTLTISVQAEDLAVYYCHQ YLSSLTFGAGTKLEIKREGKSSGSGSESKLESEVNLVESGFGLVQPSQSLSITCTVSGV FKMNS FSLTSYGVHWYRQSPGKGLEWLGVIWRGGSTDYNAAFMSRLSITKDNSKSQVFFKMNS LQADDTAIYYCAKNYYGNYGAMDYWGQGTSVTVSAPKTTPGAAAEQKLISEEDLNDIK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 19.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   760
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /note="Heavy chain variable
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          _xref="GI:2108309"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 58.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 417.2; DB 10;
Pred. No. 7.3e-100;
0; Mismatches 148;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  chain variable
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              coding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     sequence"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        coding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               sequence"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       constant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        sequence"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (사)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (V1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  coding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              coding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (CH1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               840;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     27;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   sequence"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                             339
                                                                                                                                                                                    516
                                                                                                                                                                                                                                      456
                                                                                                                                                                                                                                                                                                                   381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            63
                            696
                                                     681
                                                                             636
                                                                                                       621
                                                                                                                                                                                                            501
                                                                                                                                                                                                                                                                441
                                                                                                                                                                                                                                                                                          396
                                                                                                                                                                                                                                                                                                                                                                       321
                                                                                                                                                                                                                                                                                                                                                                                                                         261
                                                                                                                                                                                                                                                                                                                                                                                                                                                   225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JOURNAL
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 10
AR481833
LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                               밁
                                                         S
                                                                                          유
                                                                                                                                     밁
                                                                                                                                                              Ś
                                                                                                                                                                                       밁
                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                 망
                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                          8
                                                                                                                                                                                                                                                                                                                                                                                                                                    á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     유 성
             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Local Matches 56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                source
                                                                                                                                   427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    742
               580
                                                                                          487
                                                                                                                                                                                               367
                                                                                                                                                                                                                         340
                                                                                                                                                                                                                                                    307
                                                                                                                                                                                                                                                                             283
                                                                                                                                                                                                                                                                                                     247
                                                                                                                                                                                                                                                                                                                               232
                                                                                                                                                                                                                                                                                                                                                         187
                                                                                                                                                                                                                                                                                                                                                                                   172
                                                                                                                                                                                                                                                                                                                                                                                                            127
                                                                                                                                                                                                                                                                                                                                                                                                                                       112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            697
                                                                                                                    460
                                                                                                                                                                     400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     tch 58.0%; al Similarity 76.9%; 569; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AR481833
Sequence 31
AR481833
AR481833.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Α,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Patent: US 6699715-A 31 02-MAR-2004;
Location/Qualifiers
1. .752
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 (bases 1 to 752)
Ledbetter, J.A., Hayden, M., Fell, P., Mittler, R. Modified sFy molecules which mediate adhesion i
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       uses thereof
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Unclassified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Unknown.
                                                                                                                                           CTCGGAGGGGGGACCAAGCTGGAAATAAAA---GGTGGAGGCGGTTCAGGCGGAGGTGGC
                                                                                                                                                                                                                                                                                                                                                                        GTCCCTGATCGCTTCACTGGCAGTGGATATGGGACGGATTTCACTTTCACCATCAGCACT
                                                                                                                                                                                                                                                                                                                                                                                                                            CAGAAGCCAGGGCAGTCTCCGAAACTGCTGATATACTCTGCATCCAATCGCTACACTGGA 171
AAGAGCCAAGTTTTCTTAAAAATGAACAGTCTGCAAACTGATGACACAGCCATGTACTAC
                                                      GGAAGCACAAATTATAATTCGGCTCTTATGTCCAGACTGAGCATCAGCAAGGACAACTCC
                                                                                                         CACTGGGTTCGCCAGCCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGCTGGT
                                                                                                                                                                                                                                                                                                                    GTGCAGGCTGAAGACCTGGCAGTTTATTTCTGTCAGC-----AGGATTATATACCTCG
                                                                                                                                                                                                                                                                                                                                                           CAGAAACCAGGACAGCCAACCCCAAACTCCTCATCTCTGCTGCATCCAACGTAGAATCTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACCTGCAAGGCCAGTCAGAGTGTGAGTAATGATGTGGCT------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATTGTGATGACCCAGACTCCCAAATTCCTGCTTGTATCAGCAGGAGACAGGGTTACCATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TCAGTCACCGTCTCCTCA
                                        GGAAGCACAGACTATAATTCAGCTCTCAAATCCAGACTGAGCATCACCAAGGACAACTCC
                                                                                           AACTGGGTTCGCCAGCCTCCAGGAAAGGGTCTGGAGTGGCTGGGAATGATATGGGGTGAT
                                                                                                                                                                                                                                                    GTGGAGGAGGATGATATTGCAATGTATTTCTGTCAGCAAAGTAGGAAGGTTCCTTGGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TCCTGCAGAGCCAGTGAAAGTGTTGAATATTATGTCACAAGTTTAATGCAGTGGTACCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATTGTGCTCACCCAATCTCCAGCTTCTTTGGCTGTGTCTCTAGGTCAGAGAGCCACCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /mol_type="genomic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /organism="unknown"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GI:47243499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      patent US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 414.4; DB 6;
Pred. No. 4.1e-99;
0; Mismatches 141;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     759
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      752 bp
JS 6699715.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   . and Wir
between
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Winberg, G.
een cells and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -TGGTACCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      14-MAY-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                       909
                                                                 579
                                                                                           546
                                                                                                                    519
                                                                                                                                              486
                                                                                                                                                                      459
                                                                                                                                                                                                  426
                                                                                                                                                                                                                         399
                                                                                                                                                                                                                                                    366
                                                                                                                                                                                                                                                                                                                                 282
                                                                                                                                                                                                                                                                                                                                                         246
                                                                                                                                                                                                                                                                                                                                                                                   231
                                                                                                                                                                                                                                                                                                                                                                                                             186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    66
```

밁

Ś 밁 ð

δ

밁 Ś В 5 밁 Ş 밁 ક 밁 S 밁 δ

밁 ş 밁 8 片 5 유

```
RESULT 11
AR481832
LOCUS
DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE
AUTHORS
TITLE
                                             Ś
                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                             ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
S
                       밁
                                                                         밁
                                                                                               Ş
                                                                                                                           맑
                                                                                                                                                                         밁
                                                                                                                                                                                             Ś
                                                                                                                                                                                                                    닭
                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                           g
                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                            맑
                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    source
                         481
                                                                         421
                                                                                                                           361
                                                                                                                                                   340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    640
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           607
 520
                                                 460
                                                                                                  400
                                                                                                                                                                           301
                                                                                                                                                                                                                           241
                                                                                                                                                                                                                                                                            181
                                                                                                                                                                                                                                                                                                      172
                                                                                                                                                                                                                                                                                                                            121
                                                                                                                                                                                                   283
                                                                                                                                                                                                                                                   232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              569;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           727
                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                     64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AR481832
Sequence
AR481832
                                                                                                                                                                                                                                                                                                                                                                                                                                                       4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 (bases 1 to 1509)
Ledbetter,J.A., Hayden,M., Fell,P., M
Modified sFv molecules which mediate
uses thereof
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Unknown.
Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AR481832.1
                                                                                                                                                                                                                                                                                                                                                                            TCCTGCAGAGCCAGTGAAAGTGTTGAATATTATGTCACAAGTTTAATGCAGTGGTACCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATTGTGATGACCCAGACTCCCAAATTCCTGCTTGTATCAGCAGGAGACAGGGTTACCATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACCTCAGTCACCGTCTCCTC 713
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TGTGCCAGTCGGGGGGGTAACTAC-----GGCTATGCTTTGGACTACTGGGGTCAAGGA
 GGAAGCACAAATTATAATTCGGCTCTTATGTCCAGACTGAGCATCAGCAAGGACAACTCC
                        AACTGGGTTCGCCAGCCTCCAGGAAAGGGTCTGGAGTGGCTGGGAATGATATGGGGTGAT
                                      CACTGGGTTCGCCAGCCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGCTGGT
                                                                                         TCACAGAGCCTGTCCATCACTTGCACTGTCTCTGGGTTTTTCATTAACCAATTATGGTGTA
                                                                                                                                      TCTGGCGGTGGCGGATCGCAGGTGCAGGTGAAGGACTCAGGACCTGGCCCTGGTGGCGCCCC
                                                                                                                                                                            TTCGGTGGAGGCACCAAGCTGGAAATCAAACGGGGTGGCGGTGGCTCGGGCGGTGGTGGG
                                                                                                                                                                                          CTCGGAGGGGGACCAAGCTGGAAATAAAA----GGTGGAGGCGGTTCAGGCGGAGGTGGC
                                                                                                                                                                                                                            GTEGAGGAGGATGATATTGCAATGTATTTCTGTCAGCAAAGTAGGAAGGTTCCTTGGACG
                                                                                                                                                                                                                                            GTGCAGGCTGAAGACCTGGCAGTTTATTTCTGTCAGC------AGGATTATAGCTCG
                                                                                                                                                                                                                                                                           GTCCCTGATCGCTTCACTGGCAGTGGATATGGGACGGATTTCACTTTCACCATCAGCACT
                                                                                                                                                                                                                                                                                                                             CAGAAACCAGGACAGCCAAACTCCTCATCTCTGCTGCATCCAACGTAGAATCTGGG
                                                                                                                                                                                                                                                                                                                                                     CAGAAGCCAGGGCAGTCTCCGAAACTGCTGATATACTCTGCATCCAATCGCTACACTGGA
                                                                                                                                                                                                                                                                                                                                                                                                     ACCTGCAAGGCCAGTCAGAGTGTGAGTAATGATGTGGCT--
                                                                                                                                                                                                                                                                                                                                                                                                                             ATTGTGCTCACCCAATCTCCAGCTTCTTTGGCTGTGTCTCTAGGTCAGAGAGCCACCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCTCAGTCACCGTCTCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TGTGCCAGAGATGGTTATAGTAACTTTCATTACTATGTTATGGACTACTGGGGTCAAGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAGAGCCAAGTTTTCTTAAAAATGAACAGTCTGCAAACTGATGACACAGCCAGATACTAC
                                                                                                                           TCGGGTGGCGGGATCTCAGGTGCAGCTGAAGGAGTCAGGACCTGGCCTGGTGGCGCCC
                                                                         TCACAGAGCCTGTCCATCACATGCACCGTCTCAGGGTTCTCATTAACCGGCTATGGTGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US 6699715-A 30 02-MAR-2004;
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1. .1509
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /organism="unknown"
/mol_type="genomic DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GI:47243498
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         58.0%;
76.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                patent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 414.4; DB 6
Pred. No. 3.9e-99;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1509
US 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           746
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches 141;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  09 bp
6699715.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Fell,P., Mittler,R.
ch mediate adhesion h
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              linear

    and Winberg,
between cells

                                                                                                                                                                                                                                                                                                                                                                                                                                                                             30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    cells
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              14-MAY-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ັດ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    and
                                                                                                                                                                                                                                                                                                                                                     171
                                                                                                                                                                                                                                                                                                                                                                                                     111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    693
579
                                               519
                                                                         480
                                                                                                  459
                                                                                                                           420
                                                                                                                                                                            360
                                                                                                                                                                                                                           300
                                                                                                                                                                                                                                                   282
                                                                                                                                                                                                                                                                           240
                                                                                                                                                                                                                                                                                                   231
                                                                                                                                                                                                                                                                                                                            180
                                                                                                                                                                                                                                                                                                                                                                             120
                                                                                                                                                                                                                                                                                                                                                                                                                               60
                                                                                                                                                                                                                                                                                                                                                                                                                                                      63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 12
AR481831
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                            δ
                                                                               Ş
                                                                                                                               Ş
                                                                                                                                                            밁
                                                                                                                                                                                Ş
                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              멂
            밁
                                                           문
                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURES
source
                                                                                                                                                                                                                                                                                                                                                                                                                Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               541
            421
                                   400
                                                              361
                                                                                                               301
                                                                                                                                     283
                                                                                                                                                              241
                                                                                                                                                                                        232
                                                                                                                                                                                                               181
                                                                                                                                                                                                                                      172
                                                                                                                                                                                                                                                                121
                                                                                                                                                                                                                                                                                        112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     640
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       580
                                                                                                                                                                                                                                                                                                                                                                                                                   569;
                                                                                                                                                                                                                                                                                                                61 TCCTGCAGAGCCAGTGAAAGTGTTGAATATTATGTCACAAGTTTAATGCAGTGGTACCAA
                                                                                                                                                                                                                                                                                                                                        64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Unknown.
Unknown.
Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AR481831
Sequence
AR481831
                                                                                                                                                                                                                                                                                                                                                                  Н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 (bases 1 to 1527)
Ledbetter,J.A., Hayden,M., Fell,P., Mittler,R.
Modified sFv molecules which mediate adhesion
uses thereof
                                                                                                                                                                                                                                                                                                                                                                                         4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Patent: US 6699715-A 29 02-MAR-2004;
Location/Qualifiers
1. .1527
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AR481831.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCACAGAGCCTGTCCATCACATGCACCGTCTCAGGGTTCTCATTAACCGGCTATGGTGTA
                         TCACAGAGCCTGTCCATCACTTGCACTGTCTCTGGGTTTTCATTAACCAATTATGGTGTA
                                                              TTCGGTGGAGGCACCAAGCTGGAAATCAAACGGGGTGGCGGTGGCTCGGGCGGTGGTGG
                                                                                                                                  CTCGGAGGGGGACCAAGCTGGAAATAAAA---GGTGGAGGCGGTTCAGGCCGAGGTGGC
                                                                                                                                                               GTGGAGGAGGATGATTTGCAATGTATTTCTGTCAGCAAAGTAGGAAGGTTCCTTGGACG
                                                                                                                                                                             GTGCAGGCTGAAGACCTGGCAGTTTATTTCTGTCAGC------AGGATTATAGCTCG
                                                                                                                                                                                                               GTCCCTGATCGCTTCACTGGCAGTGGATATGGGACGGATTTCACTTTCACCATCAGCACT
                                                                                                                                                                                                                                                                  CAGAAACCAGGACAGCCAAACTCCTCATCTGCTGCATCCAACGTAGAATCTGGG
                                                                                                                                                                                                                                                                               CAGAAGCCAGGGCAGTCTCCGAAACTGCTGATATACTCTGCATCCAATCGCTACACTGGA
                                                                                                                                                                                                                                                                                                                                         ACCTGCAAGGCCAGTCAGAGTGTGAGTAATGATGTGGCT
                                                                                                                                                                                                                                                                                                                                                                                 ATTGTGATGACCCAGACTCCCAAATTCCTGCTTGTATCAGCAGGAGACAGGGTTACCATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCTCAGTCACCGTCTCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGTGCCAGAGATGGTTATAGTAACTTTCATTACTATGTTATGGACTACTGGGGTCAAGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGTGCCAGTCGGGGGGTAACTAC-----GGCTATGCTTTGGACTACTGGGGTCAAGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAGAGCCAAGTTTTCTTAAAAATGAACAGTCTGCAAACTGATGACACAGCCAGATACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAGAGCCAAGTTTTCTTAAAAATGAACAGTCTGCAAACTGATGACACAGCCATGTACTAC
                                                                                                                                                                                                                                                                                                                                                                  ATTIGTGCTCACCCAATCTCCAGCTTCTTTGGCTGTGTCTAGGTCAGAGAGCCACCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCTCACTCACCGTCTCCTC
                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /organism="unknown"
/mol_type="genomic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GI:47243497
                                                                                                                                                                                                                                                                                                                                                                                                                            58.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               n patent US 66
                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                Score 414.4; DB 6
Pred. No. 3.9e-99;
0; Mismatches 141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     713
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     327 bp
3 6699715.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DNA
                                                                                                                                                                                                                                                                                                                                                                                                                   141;
                                                                                                                                                                                                                                                                                                                                                                                                                                          6
                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                        Length
```

between and Winberg

cells

9 and

PAT

14-MAY-2004

693

720

639

600

660

30;

Gaps

-TGGTACCAA

231 180 171 120 111 60 63

459

420 399 360 339 300 282 240

jį.

δ

밁 δ 밁

```
AUTHORS
TITLE
JOURNAL
FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DEFINITION
ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 13
AR364987
                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ð
                                      ঠ
                                                                     밁
                                                                                          ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Locus
                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      source
                                                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity
                                                                                                                                                                                    187
                                                                                                                              247
                                                                                                                                                        241
                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                           127
              367
                                          355
                                                                     307
                                                                                                   295
                                                                                                                                                                                                                                                                       121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  640
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         580
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   520
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          460
                                                                                                                                                                                                                                                                                                    67
                                                                                                                                                                                                                                                                                                                                                                                                                    548;
                                                                                                                                                                                                                                                                                                                             64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AR364987
Sequence
AR364987
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Unknown.
Unknown.
                                                                                                                                                                                                                                                                                                                                                            7
                                                                                                                                                                                                                                                                                                                                                                                     4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 (bases 1 to 729)
Ladner, R.C., Bird, R.E. and Hardman, K.
Ladner, as a sing single chain polypeptide
Pateint: US 5455030-A 16 03-OCT-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AR364987.1
                             TCGCAGGTGCAGGTGAAGGAGTCAGGACCTGGCCCTTGGTGGCGCCCTCACAGAGCCTGTCC 414
                                                                                           ACCAAGCTGGAAATAAAAAGGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCGGA
                                                                                                                                               GAAGACCTGGCAGTTTATTTCTGTCAGCAG-----GATTATAGCTCGCTCGGAGGGGGG
                                                                                                                                                                                                                                                                       GGGCAGTCTCCGAAACTGCTGATATACTCTGCATCCAATCGCTACACTGGAGTCCCTGAT
                                                                                                                                                                                                                                                                                                                                                                                       ATTGTGATGACCCAGACTCCCAAATTCCTGCTTGTATCAGCAGGACAGGGTTACCATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAGAGCCAAGTTTTCTTAAAAATGAACAGTCTGCAAACTGATGACACAGCCATGTACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGAAGCACAAATTATAATTCGGCTCTTATGTCCAGACTGAGCATCAGCAAGGACAACTCC
              CTGGATGTGCAGCTGAAGGAGTCAGGACCTGTCCTGGTGGCGCCCTCACAGAGCCTGTCC
                                                                                                                            GAAGATGCTGCCACTTATTACTGTCAGCAGTACAGTGGTTACGGACTCACGTTCGGTGCT
                                                                                                                                                                                    CGCTTCAGTGGCGGTGGGGACCTCTTACTCTCACAATCAGCAGTGTGGAGGCT
                                                                                                                                                                                                              CGCTTCACTGGCAGTGGATATGGGACGGATTTCACTTTCACCATCAGCACTGTGCAGGCT
                                                                                                                                                                                                                                             GGTGCCTCCCCAAACTCTGGGTTTATGGCACATCCAACTTGGCTTCTGGAGTCCCTGCT
                                                                                                                                                                                                                                                                                                    ACCTGCAGGGCCAGCTCAAGTGTAAGTTCCAGTTACTTGCACTGGTACCAGCAGAAGTCA
                                                                                                                                                                                                                                                                                                                             ACCTGCAAGGCCAGTCAGAGTGTGAGT---AATGATGTGGCTTGGTACCAACAGAAGCCA 120
                                                                                                                                                                                                                                                                                                                                                          AATGTGCTCACCCAGTCTCCAGCAATCATGTCTGCATCTCCAGGGGAAAAAGGTCACCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ACCTCAGTCACCGTCTCCTC 713
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGAAGCACAGACTATAATTCAGCTCTCAAATCCAGACTGAGCATCACCAAGGACAACTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AACTGGGTTCGCCAGCCTCCAGGAAAGGGTCTGGAGTGGCTGGGAATGATATGGGGTGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CACTGGGTTCGCCAGCCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGCTGGT
                                                                       CCCACCAAGCTTAAAGAATCTGGTTCTGTTTCTTCTGAACAGCTGGCTCAGTTTCGTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TGTGCCAGAGATGGTTATAGTAACTTTCATTACTATGTTATGGACTACTGGGGTCAAGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGTGCCAGTCGGGGGGGTAACTAC-----GGCTATGCTTTGGACTACTGGGGTCAAGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAGAGCCAAGTTTTCTTAAAAATGAACAGTCTGCAAACTGATGACACAGCCAGATACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      organism="unknown"
                                                                                                                                                                                                                                                                                                                                                                                                                               57.2%;
75.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GI:34428209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       _type="genomic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           patent
                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                Score 408.2; DB 6;
Pred. No. 1.8e-97;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           729 bp
US 5455030.
                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DNA
                                                                                                                                                                                                                                                                                                                                                                                                                 163;
                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                            Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              binding molecules
                                                                                                                                                                                                                                                                                                                                                                                                                 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           03-SEP-2003
                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                       366
                                                                                                                                                                                    246
                                                                                                                                                                                                                                                                       180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 579
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              540
              426
                                                                                                 354
                                                                                                                            306
                                                                                                                                                                                                               240
                                                                                                                                                                                                                                             186
                                                                                                                                                                                                                                                                                                    126
                                                                                                                                                                                                                                                                                                                                                          66
                                                                                                                                                                                                                                                                                                                                                                                       63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  693
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         639
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          519
                                                                                                                                                        294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 14
SYN507107
LOCUS
                                                                                                                                                                                                                                                                                                                                                                        REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                             JOURNAL
                                                                                                                                                                                                                                                                                                               source
 source
                                                                       source
                                                                                                                                            source
                                                                                                                                                                                                                 source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  712
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          652
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 595
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             547
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       487
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 475
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        727
                                                                                                                                                                                                                                                                                                                                                                                                                                      Grosse-Hovest, L.

Produktion und Charakterisierung supra-agonistischer bispezifischer CD28-Antikoerper zur Tumor-Immuntherapie Thesis (2002) Department of Biology, University of Tuebingen,
                                                                                                                                                                                                                                                                                                                                                       Submitted (28-AUG-2002) Grosse-Hovest L., Max-Planck-Institute for Biochemistry, Am
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                synthetic construct
synthetic construct
                                                                                                                                                                                                                                                                                                                                             Max-Planck-Institute Martinsried, GERMANY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AJ507107.1 GI:22759563 antibody; heavy chain;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Synthetic construct
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SYN507107
                                                                                                                                                                                                                                                                                                                                                                                       Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                     Grosse-Hovest, L.
                                                                                                                                                                                                                                                                                                                                                                                                                                  Tuebingen,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             region.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AJ507107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      clone r28M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTAAAAATGAACAGTCTGCAAACTGATGACACAGCCATGTACTACTGTGCCA----GTCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AATTCGGCTCTTATGTCCAGACTGAGCATCAGCAAGGACAACTCCAAGAGCCAAGTTTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGCTGGTGGAAGCACAAATTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATCACTTGCACTGTCTCTGGGTTTTCATTAACCAACTATGGTGTACACTGGGTTCGCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATCACTTGCACTGTCTCTGGGTTTTCATTAACCAATTATGGTGTACACTGGGTTCGCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GAACGAATCTTTTACTATGCTATGGACTATTGGGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGGGGTAACTACGGCTATGCTTTGGACTACTGGGGTCAAGGAACCTCAGTCACCGTCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TTAAAAATGAACAGTCTGCAAATTGATGACACAGCCATATACTACTGTGCCAAACGACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AATTCAGCTCTCATGTCCAGACTGAGCATCAGCAAAGACAATTCCAAGAGCCAAGTTTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGCTGGTGGAAACACAAATTAT
                                                                                                                                                                                                                                                                                                                                                                                                                 (bases 1 to 1632)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   sequences; artificial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   714
                                                                  /organism="Mus musculus"
/mol type="other RNA"
/db xref="taxon:1090"
/cell line="hybridoma 9.3"
856. 1218
/organism="Mus musculus"
/mol type="other RNA"
/db xref="taxon:10090"
/cell line="hybridoma 9.2
1264. ..1599
                                                                                                                                           /organism="Mus musculus'
/mol type="other RNA"
/db xref="taxon:10090"
/cell line="hybridoma 9
439. 798
                                                                                                                                                                                                                            /focus
                                                                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                                                                          clone="r28M"
                                                                                                                                                                                                                                                                      /mol_type="other RNA"
/db_xref="taxon:32630"
                                                                                                                                                                                                                                                                                                    organism="synthetic
                                                                                                                                                                                                                                          rearranged
                                                                                                                                                                                                                                                                                                                                                                                                                                  Germany
                                                                                                                                                       line="hybridoma 9.3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1632 bp
for anti-CD28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           immunoglobulin;
                                                                                                                                                                                                  musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   sequences
              9.2.
                                                                                    9.3"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    and
              .27"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A linear anti-HMWG Sc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           light
                                                                                                                                                                                                                                                                                                                                                         Membrane Biochemistry,
Klopferspitz 18a, 82152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           chain;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ScFv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SYN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Scrv; variable
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    antibody,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   02-SEP-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          711
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 651
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 534
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               486
```

밁 δ 문 δ

밁

á

```
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  V_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    V_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        V_region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     misc_feature
                                                                                                                                361
481
                               400
                                                              421
                                                                                                                                                               283
                                                                                                                                                                                                  301
                                                                                                                                                                                                                                 232
                                                                                                                                                                                                                                                                  241
                                                                                                                                                                                                                                                                                                   172
                                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                                     112
                                                                                                                                                                                                                                                                                                                                                                                                      121
                                                                                                                                                                                                                                                                                                                                                                                                                                     64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        563;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATTGTGATGACCCAGACTCCCAAATTCCTGCTTGTATCAGCAGGAGACAGGGTTACCATA
                      TCACAGAGCCTGTCCACTTGCACTGTCTCTGGGTTTTCATTAACCAATTATGGTGTA
                                                                              TCTGGCGGTGGCGGATCGCAGGTGCAGGTGAAGGAGTCAGGACCTGGCCTGGTGGCGCCCC
                                                                                                                              TTCGGAGGGGACCAAGCTGGAAATAAAACGGGGAGGCGGCGGTTCTGGCGGTGGCGGA
                                                                                                                                                                                                                     GTGCAGGCTGAAGACCTGGCAGTTTATTTCTGTCAGC------AGGATTATAGCTCG
                                                                                                                                                                                                                                                                                       GTCCCTGATCGCTTCACTGGCAGTGGATATGGGACGGATTTCACTTTCACCATCAGCACT
                                                                                                                                                                                                                                                                                                                                                                CAGAAGCCAGGCCAGTCTCCGAAACTGCTGATATACTCTGCATCCAATCGCTACACTGGA
                                                                                                                                                                                                                                                                                                                                                                                                  TCCTGCAGAGCCAGTGAGAGTGTTGAATATTATGTCACAAGTTTAATGCAGTGGTACCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCTGCAAGGCCAGTCAGAGTGTGAGTAATGATGTGGCT------
                                                                                                                                                             CTCGGAGGGGGACCAAGCTGGAAATAAAA---GGTGGAGGCGGTTCAGGCGGAGGTGGC
                                                                                                                                                                                                GTGGACGAGGATGATGTTGCAATGTATTTCTGTCAGCAAAGTAGGAAGGTTCCTTACACG
                                                                                                                                                                                                                                                                CAGAAGCCAGGACACCCAAACTCCTCATCTTTGCTGCATCCAACGTAGAATCTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATCGAGCTCACTCAGTCTCCAGCTTCTTTGGCTGTGTCTCTAGGGCAGAGAGCCACCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /product="anti-CD28 and anti-HMWG ScFv antibody"
/protein id="CAD45042.1"
/db_xref="di-CD28 and anti-HMWG ScFv antibody"
/protein id="CAD45042.1"
/db_xref="di-CD2845042.1"
/db_xref="di-CD2845042.1"
/db_xref="di-CD2845042.1"
/db_xref="mid="McGWsHFLFLLSGRDGVLSDIELTQSPASLAVSLGQRATISCRA
SESVEYYVTSLMQWYQQKPGQDPKLLIFAASHVESGYGGGSGGGSGYVKLQGGFGKLVTP
EDDVAMYFCQQSRKVPYTFGGGTKLEIKRGGGSGGGGGGGGGYVKNSALMSRKSISKD
EDDVAMYFCQGFSLSDYGYHWVRQSPCQLEWHLGVINAAGGTTVTVSSASTKGPSVPP
SQSLSITCTVGGFSLSDYGYHWVRQSPCQGLEWLGVINAAGGTTVTVSSASTKGPSVPP
NSKSQVFLKMNSLQADDTAVYYCARDKGYSYYSMDYWGQGTTVTVSSASTKGPSVPP
LAPSSSGSGQVKLQGSGPELVKPGASVTISCRASGYAFSRSMNMWVKQRPCQGLEWIG
RIYPGGGTTVTVSSGGGGSGGGGSGGGGSGJIELTQSPASLAVSLGQRATISCRASSSV
DSYGNSFMHWYQQKFGQPFKLLIYLASNLESGVPARFSGSGSRTDFTLTIDPVEADDA
DSYGNSFMHWYQQKFGQPFKLLIYLASNLESGVPARFSGSGSRTDFTLTIDPVEADDA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /note="linker sequence" 1264. .1599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /product="immunoglobulin
1219. .1263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         856.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATYYCQQNNEDPLTFGGGTKLELKRAAAHHHHHH"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /mol_type="other RNA"
/db_xref="taxon:10090"
/cell_line="hybridoma 9.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /product="immunoglobulin light chain variable
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       'note≈"linker sequence"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     product = "immunoglobulin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            note="synthetic"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       product="immunoglobulin light chain variable
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             transl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  57.1%;
76.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               table=11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       inker sequence"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 407.8; DB 12; Pred. No. 2.2e-97;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      heavy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      heavy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      147;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        chain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      chain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      variable
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      variable region"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1632;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    27;
                                                                                                                                                                                                                                                                                                                                                                                                                                   TGGTACCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    region"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       region"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                             459
                                                                                               399
                                                                                                                              420
                                                                                                                                                             339
                                                                                                                                                                                              360
                                                                                                                                                                                                                                                                                                 231
                                                                                                                                                                                                                                                                                                                                  240
                                                                                                                                                                                                                                                                                                                                                                   171
                                                                                                                                                                                                                                                                                                                                                                                                  180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    120
                                                              480
                                                                                                                                                                                                                                                                300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 15
AR481837
LOCUS
 5
                                    밁
                                                                        S
                                                                                                                                     Ś
                                                                                                                                                                             밁
                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                           á
                                                                                                               밁
                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                 맑
                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         닭
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         뮍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           뭉
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      JOURNAL
```

δ

밁 Ś 문 ક 밁 á 밁 Ś 밁 δ

S 밁 Ş 밁

```
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local (
                                                                                                                                           310
430
                                 334
                                                                                                                                                                          232
                                                                                                                                                                                                                                                                                      190
                                                                                                                                                                                                                                                                                                                        112
                                                                                                                                                                                                                                                                                                                                                           130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          781
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             697
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 721
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  640
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             520
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      572;
                                                                                                                                                                                                                                                                                                                                                                                           64 ACCTGCAAGGCCAGTCAGAGTGTGAGTAATGATGTGGCT-----TGGTACCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                  70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AR481837
Sequence
AR481837
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 (bases 1 to 824)
Ledbetter, J.A., Hayden, M., Fell, P., Mittler, R. and Winberg,
Modified sFv molecules which mediate adhesion between cells
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   uses thereof
Patent: US 6699715-A 38 02-MAR-2004;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Unclassified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AR481837.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
GGCGGTTCAGGCGGCGGTGGATCCCTGGCTCAGGTGCAGCTGAAGGAGTCAGGACCTGGC
                    GGTGGCTCTGGCGGTGGCGGATCG------CAGGTGCAGGTGAAGGAGTCAGGACCTGGC
                                                                    TTCGGAGGGGGGACCAAGCTGGAAATAAAACGGGCTTCGGGTGGTGGTGGTCTGGAGGT
                                                                                                      CTCGGAGGGGGACCAAGCTGGAAATAAAA------GGTGGAGGCGGTTCAGGCGGA
                                                                                                                                           GTGGACGAGGATGATGTTGCAATGTATTTCTGTCAGCAAAGTAGGAAGGTTCCTTACACG
                                                                                                                                                                            GTGCAGGCTGAAGACCTGGCAGTTTATTTCTGTCAGC------
                                                                                                                                                                                                                                               GTCCCTGATCGCTTCACTGGCAGTGGATATGGGACGGATTTCACTTTCACCATCAGCACT
                                                                                                                                                                                                                                                                                      CAGAAGCCAGGACAGCCCAAACTCCTCATCTTTGCTGCATCCAACGTAGAATCTGGG
                                                                                                                                                                                                                                                                                                       CAGAAGCCAGGGCAGTCTCCGAAACTGCTGATATACTCTGCATCCAATCGCTACACTGGA 171
                                                                                                                                                                                                                                                                                                                                                           TCCTGCAGAGCCAGTGAGAGTGTTGAATATTATGTCACAAGTTTAATGCAGTGGTACCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                  ATTGTGCTCACCCAATCTCCAGCTTCTTTGGCTGTGTCTCTAGGGCCAGAGAGCCACCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATTGTGATGACCCAGACTCCCAAATTCCTGCTTGTATCAGCAGGAGACAGGGTTACCATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACGGTCACTGTCTCCTC 797
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCAGTCACCGTCTCCTC 713
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGTGCCAGAGATAAGGGATACTCCTATTACTATTCTATGGACTACTGGGGCCAAGGGACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TGTGCCAG----TCGGGGGGTAACTACGGCTATGCTTTGGACTACTGGGGTCAAGGAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAGAGCCAAGTTTTCTTAAAAATGAACAGTCTGCAAACTGATGACCACGCCATGTACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGAAGCACAAATTATAATTCCGCTCTTATGTCCAGACTGAGCATCAGCAAGGACAACTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CACTGGGTTCGCCAGCCTCCAGGAAAGGGTCTGGAGTGGCTGGAGTAATATGGGCTGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAGAGCCAAGTTTTCTTAAAAATGAACAGTCTGCAAGCTGATGACACAGCCGTGTATTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGAGGCACGAATTATAATTCGGCTCTCATGTCCAGAAAGAGCATCAGCAAAGACAACTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CACTGGGTTCGCCAGTCTCCAGGACAGGGACTGGAGTGGCTGGGAGTAATATGGGCTGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /organism="unknown"
/mol_type="genomic"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GI:47243503
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              from patent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     56.1%;
76.4%;
                                                                                                                                                                                                                rttägtegeaetegetetegeaeaaactteaeceteaaeatecatect
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 400.2; DB 6;
Pred. No. 2.4e-95;
0; Mismatches 138;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                824 bp
US 6699715
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     linear
                                                                                                                                                                            AGGATTATAGCTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      39;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PAT 14-MAY-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ຸດ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      and
                                                                    429
                                                                                                                                                                                                                                                                                                                                                           189
                                                                                                                                                                                                                                                                                                                                                                                              111
                                                                                                                                                                                                                                                                                                                                                                                                                                  129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     63
489
                                   387
                                                                                                        333
                                                                                                                                           369
                                                                                                                                                                              282
                                                                                                                                                                                                                309
                                                                                                                                                                                                                                                   231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  696
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         639
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             579
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    519
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5
```

Sear Job	В	Ş	밁	Ş	밁	Ş	밁	ঠ	В	Ş	ф	ş
ch con												
Search completed: February 18, Job time : 3221.24 secs	790 GGTCAA	685 GGTCAA	730 GCCGTG	628 GCCATG	670 AAAGAC	568 AAGGAC	610 ATATEG	508 ATATGG	550 GACTAT	448 AATTAT	490 CTGGTG	388 CTGGTG
		GGTCAAGGAACCTCAGTCACCGTCTCCTC	GCCGTGTATTACTGTGCCAGAGATAAGGGGATACTCCTATTACTATTCTATGGACTACTGG	GCCATGTACTACTGTGCCAGTCGGGGGGGTAACTACGGCTATGCTTTGGACTACTGG	AAAGACAACTCCAAGGGCCAAGTTTTCTTAAAAATGAAGAGTCTGCAAGCTGACACA	AÄGGACAACTCCAAGAGCCAAGTTTTCTTAAAAATGAACAGTCTGCAAACTGATGACACA	ATATGGGCTGGTGGAGCACGAATTATAATTCGGCTCTCATGTCCAGAAAGAGCATCAGC	ATATGGGCTGGTGGAAGCACAAATTATAATTCGGCTCTTATGTCCAGACTGAGCATCAGC	GACTATGGTGTTCATTGGGTTCGCCAGTCTCCAGGACAGGGACTGGAGTGCCTGGGAGTA	AATTATGGTGTACACTGGGTTCGCCAGCCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTA	CTGGTGACGCCTCACAGAGCCTGTCCATCACTTGTACTGTCTCTGGGTTTTCATTAAGC	CTGGTGGCGCCCTCACAGAGCCTGTCCATCACTTGCACTGTCTCTGGGTTTTCATTAACC
2005, 22:26:01	CACCGTCTCC	CACCGTCTCC	CAGAGATAAG	CAGTCGG	CCAAGTTTTC	CCAAGTTTTC	CACGAATTAT	CACAAATTAT	GGTTCGCCAG	GGTTCGCCAG	GAGCCTGTCC	GAGCCTGTCC
5:01	NC 818	rc 713	GATACTCCT	GGGGTAACT	TAAAAATGA	TAAAAATGA	ATTCGGCTC	ATTCGGCTC	CTCCAGGAC	CTCCAGGAA	ATCACTTGTA	ATCACTTGCA
			ATTACTATTO	ACGCTATGO	AGAGTCTGCA	ACAGTCTGC	CATGTCCAG	TATGTCCAC	AGGGACTGG	AGGETCTGGA	CTGTCTCTGG	CTGTCTCTGG
			TATGGACTA	TTTGGACTA	AGCTGATGA	AACTGATGA	AAAGAGCAT	ACTGAGCAT	GTGCCTGGG	GTGGCTGGG	GTTTTCATT	GTTTTCATT
			CIGG 789	CTGG 684	CACA 729	CACA 627	CAGC 669	CAGC 567	AGTA 609	AGTA 507	AAGC 549	AACC 447
			39	34	ě	27	9	§7	)9	)7	9	17

je V				
	•			

```
Minimum
Maximum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Run
                                                                                                                                                                                                                                      Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OM nucleic - nucleic search, using
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Post-processing:
                                                                                                                                                                                                                             ö.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        on:
                                                                                                                                                                                                                                                                               Pred. No. is the number of results predicted by chance to have score greater than or equal to the score of the result being pu and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                       pred. No. is t
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BB BB
              480
478.4
478
                                                                                                                                                                                                                             Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               seq
geq
                                                                 480
480
480
                                                                                                480
480
480
480
                                             480
                                                                                                                                                                                                                                                                                                                      length:
                                                                                                                                                                                  100.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 February 18, 2005, 18:34:54; Search time 418.122 Seconds (without alignments)
10108.771 Million cell updates/sec
                                                                                                                                                                                                                             Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-10-075-947A-2
714
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4390206 seqs, 2959870667 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
   agtattgtgatgacccagac.....cctcagtcaccgtctcctca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Copyright
                                                                                                                                                                                                                                                                                                                       geneseqn2003ds:*
geneseqn2004as:*
geneseqn2004bs:*
                                                                                                                                                                                                                                                                                                                                                          geneseqn2003cs:*
                                                                                                                                                                                                                             Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2000000000
   GenCore version 5.1.6 (c) 1993 - 2005 Compugen Ltd
                                                                                                                                                                                                                              멂
                                                                                                                                                                                                                             딩
             ADQ91089
AAZ50584
                                                                                                                                                                                               ABA92027
                                                                                                                                                                                                        AAT86310
   AAZ50585
                                           ADQ91105
ADQ991079
ADS99440
ADS99434
ADS99430
ADS99430
ADS99430
ADS99442
ADS99442
ADS99444
ADS99444
                                  ADS99454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ¥8
                                                                                                                                                                                                                                                            SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8780412
Aat86310 Single ch
Aba92027 Anti-disi
Aat86312 Single ch
Adq91081 Antibody
Adq91081 Antibody
Adq91095 Antibody
Adq91079 Bispecifi
Ads99440 Antibody
Ads99434 Antibody
Ads99430 Antibody
Ads99430 Antibody
Ads99432 Antibody
Ads99432 Antibody
Ads99434 Antibody
                                                                                                                                                                                                                             Description
                                                                                                                                                                                                                                                                                          printed,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          714
```

υ 4 4 4	4 4 4 3	42	41	40	9	38	37	36	ω G	34	ယ	32	31	30	29	28	27	26	25	24	23	22	21	
365.6	365.6		٠	٠	•	•	396.8	•	•	•	398.4	•		401.8	406.8	407.8	408.4	•	•	414.4	416	417	475.2	
51.2	51.2	51.2	53.7	55.1	55.3	55.5	55.6	55.8	55.8	55.8	55.8	56.1	56.3	56.3	57.0	57.1	57.2	57.2	57.2	58.0	58.3	58.4	66.6	
1645	1491	785	1931	739	724	738	720	737	737	720	720	824	1528	1510	729	753	729	729	729	752	825	1683	1380	
10	10	10	æ	N	N	N	N	N	N	N	N	N	N	N	N	12	N	N	N	N	10	10	13	
ADD25779	ADD25777	ADD25776	ABV73341	AAX78161	AAQ05714	AAQ70612	AAQ51540	AAT94606	AAT66143	AAT36463	AAT13739	AAT69222	AAT69216	AAT69217	AAQ05715	ADG28587	AAT36464	AAT13740	AAQ51541	AAT69218	ADD25692	ADD25706	ADR43338	
Binding	Add25777 Binding d	Binding	_	Aax78161 pUR4125 V			Codir		Aat66143 pUR.4124		Aat13739 Single ch			Aat69217 Retroviru		-1	Aat36464 18-2-3/TR	Aat13740 Single ch	Aaq51541 Coding se	Aat69218 2E12 6FV	N	Binding	scFv ant	

## ALIGNMENTS

```
RESULT 1
AAT86310
Synthetic
                                                                                                                                                                                                                                           pro-drug converting
                                                                                                                                                                                                                                                    scFv; tumour; neuroblastoma; osteosarcoma; soft tissu-
tissue imaging; target delivery; toxin; streptavidin;
                                                                                                                                                                                                                                                                     Antibody construct; disialoganglioside; GD2; single chain Fv fragment;
                                                                                                                                                                                                                                                                                    Single chain anti-disialoganglioside GD2 antibody 3G6-scFv.
                                                                                                                                                                                                                                                                                                       06-APR-1998
                                                                                                                                                                                                                                                                                                                      AAT86310;
                                                                                                                                                                                                                                                                                                                                      AAT86310 standard; DNA;
                                                                                                                         Cheung NV, Larson SM,
                                                                                                                                                           20-MAR-1996;
                                                                                                                                                                           20-MAR-1997;
                                                                                                                                                                                           25-SEP-1997.
                                                                                                                                                                                                            WO9734634-A1.
                                                                                                                                          (SLOK ) SLOAN KETTERING INST CANCER RES.
                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                                           96US-0013703P
                                                                                                                                                                           97WO-US004427.
                                                                                                                                                                                                                                            enzyme; GD2-targeted lymphocyte; ss.
                                                                                                                         Guo
                                                                                                                                                                                                                                                                                                                                        714
                                                                                                                         Η,
                                                                                                                                                                                                                                                                                                                                        ВÞ
                                                                                                                        Rivlin K,
                                                                                                                           Sadelain
                                                                                                                                                                                                                                                            tissue sarcoma;
```

The present sequence encodes a recombinant single chain peptide, 3G6-scFv. The peptide is an antibody construct comprising the variable regions of the heavy and light chains of an antibody against disialoganglioside (GD2) as a single chain Fv fragment (scFv). GD2 occur in many tumours types including neuroblastoma, osteosarcomas and other soft tissue sarcomas, medulloblastomas, high grade astrocytomas,

GD2 occurs

toxins, to such cells.

Disclosure; Page 11-12; 31pp; English.

WPI; 1997-479996/44.

Recombinant single chain anti-disialoganglioside GD2 antibody - useful to detect tumour cells expressing GD2 and to target therapeutic agents, e.g.

```
RESULT 2
ABA92027
ID ABA9
XX
AC ABA9
AC ABA9
XX
DT 23-M
XX
XX
Anti
                                                                                                                                                                               밁
                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                               망
                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                        맑
                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ភិនិស្សិស្ត្រិន្តិនិង្ស
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches 714;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                melanomas and small cell lung cancer. The peptide can be detectably labelled, preferably with 99m-Tc, for tissue imaging of cells expressing GD2. It can also be used to target delivery of a therapeutic or pretherapeutic agent, such as a toxin, streptavidin or a pro-drug converting enzyme, to cells expressing GD2. The peptide may further comprise CD8 to facilitate the formation of GD2-targeted lymphocytes. T cells containing
               Anti-disialoganglioside
                                            23-MAY-2002
                                                                                                       ABA92027
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
                                                                                                                                                                                                         199
                                                                                                                                                                                                                                        601
                                                                                                                                                                                                                                                                  601
                                                                                                                                                                                                                                                                                               541
                                                                                                                                                                                                                                                                                                                             541
                                                                                                                                                                                                                                                                                                                                                           481
                                                                                                                                                                                                                                                                                                                                                                                     481
                                                                                                                                                                                                                                                                                                                                                                                                                   421
                                                                                                                                                                                                                                                                                                                                                                                                                                                421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                               GCTCTTATGTCCAGACTGAGCATCAGCAAGGACAACTCCAAGAGACCAAGTTTTCTTAAAA
                                                                                                                                                                                                                                                                                                                                                                           GGAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGCTGGTGGAAGCACAAATTATAATTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                  TGCACTGTCTCTGGGTTTTCATTAACCAATTATGGTGTACACTGGGTTCGCCAGCCTCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GTGCAGGTGAAGGAGTCAGGACCTGGCCTGGTGGCGCCCTCACAGAGCCCTGTCCATCACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATAACCTGCAAGGCCAGTCAGAGTGTGAGTAATGATGTGGCTTGGTACCAACAGAAGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AGTATTGTGATGACCCAGACTCCCAAATTCCTGCTTGTATCAGCAGGAGACAGGGTTACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        714 BP; 174 A; 168 C; 205 G; 167
                                                                                                                                                                                                        TACGGCTATGCTTTGGACTACTGGGGTCAAGGAACCTCAGTCACCGTCTCCTCA 714
                                                                                                                                                                                                                                                       ATGAACAGTCTGCAAACTGATGACACAGCCATGTACTACTGTGCCAGTCGGGGGGGTAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GTGCAGGTGAAGGAGTCAGGACCTGGCCTGGTGGCGCCCTCACAGAGCCTGTCCATCACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTGGAAATAAAAGGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCGGATCGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTGGAAATAAAAGGTGGAGGCGGTTCAGGCGGAGGTGGCTTTGGCGGTTGGCGGATCGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGGCAGTCTCCGAAACTGCTGATATACTCTGCATCCAATCGCTACACTGGAGTCCCTGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGGCAGTCTCCGAAACTGCTGATATACTCTGCATCCAATCGCTACACTGGAGTCCCTGAT
                                                                                                     standard; cDNA;
                                                                                                                                                                                                                                     ATGAACAGTCTGCAAACTGATGACACAGCCATGTACTACTGTGCCAGTCGGGGGGGTAAC
                                                                                                                                                                                                                                                                                               GCTCTTATGTCCAGACTGAGCATCAGCAAGGCACAACTCCAAGAGCCAAGTTTTCTTAAAA
                                                                                                                                                                                                                                                                                                                                                          GGAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGCTGGTGGAAGCACAAATTATAATTCG
                                                                                                                                                                                                                                                                                                                                                                                                                   TGCACTGTCTCTGGGTTTTCATTAACCAATTATGGTGTACACTGGGTTCGCCAGCCTCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CGCTTCACTGGCAGTGGATATGGGACGGATTTCACTTTCACCATCAGCACTGTGCAGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CGCTTCACTGGCAGTGGATATGGGACGGATTTCACTTTCACCATCAGCACTGTGCAGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATAACCTGCAAGGCCAGTCAGAGTGTGAGTAATGATGTGGCTTGGTACCAACAGAAGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGTATTGTGATGACCCAGACTCCCAAATTCCTGCTTGTATCAGCAGGAGACAGGGTTACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             100.0%; ilarity 100.0%; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     can also be used to target GD2-producing tumour cells
                                            (first entry)
               GD2 single chain
                                                                                                     714
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                     BP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 714; DB 2;
Pred. No. 6.7e-198;
Mismatches 0;
               antibody
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
               3G6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
             SCFV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               converting
                                                                                                                                                                             714
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                        540
                                                                                                                                                                                                                                                                                                                                                                                                                                                480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         120
                                                                                                                                                                                                                                                                  660
                                                                                                                                                                                                                                                                                               600
                                                                                                                                                                                                                                                                                                                             600
                                                                                                                                                                                                                                                                                                                                                                                     540
                                                                                                                                                                                                                                                                                                                                                                                                                   480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
```

Ş

300

240

CGCTTCACTGGCAGTGGATATGGGACGGATTTCACCTTTCACCATCAGCACTGTGCAGGCT GGGCAGTCTCCGAAACTGCTGATATACTCTGCATCCAATCGCTACACTGGAGTCCCTGAT GGGCAGTCTCCGAAACTGCTGATATACTCTGCATCCAATCGCTACACTGGAGTCCCTGAT ATAACCTGCAAGGCCAGTCAGAGTGTGAGTAATGATGTGGCTTGGTACCAACAGAAGCCA ATAACCTGCAAGGCCAGTCAGAGTGTGAGTAATGATGTGGCTTGGTACCAACAGAAGCCA AGTATTGTGATGACCCCAGACTCCCAAATTCCTGCTTGTATCAGCAGGAGACAGGGTTACC AGTATTGTGATGACCCAGACTCCCAAATTCCTGCTTGTATCAGCAGGAGACAGGGTTACC

Ş 맑 Ś 밁 8 밁

> 121 121

61 61 Н ۳

Ś

Query Match Best Local S Matches 714

Similarity

100.0%;

Score 714; DB 6; Pred. No. 6.7e-198; Nismatches 0;

Length 714; Indels

<u>,,</u>

Gaps

120

60

180 120

180

714;

Conservative

0;

밁

```
the construction of the present 366 scPv gene using a mouse scPv module/recombinant phage antibody system. The scPv was used in fusion proteins of the invention which comprised the scPv inked to the human T cell surface receptor CD28. T cells expressing such fusion proteins exhibit enhanced survival when reintroduced to an in vivo environment. They can be used to induce an immune response to cells that express the antigen to which the antibody is specific. Cells expressing a fusion protein including an anti-GD2 scFv are useful for treatment of melanomas, neuroblastomas, small lung carcinoma, sarcomas and brain tumours that express GD2 as a surface antigen. Cells expressing the fusion proteins of the invention can also be used for in vitro purging of stem cells or bone marrow and for in vivo targeting of tumour cells and other antigen-bearing cells for imaging
                                                                                                                                                                                                                                                                         The present sequence is that of cDNA encoding a single chain scFv antibody that is derived from an anti-disialoganglioside GD2 antibody produced by 3G6 hybridoma cells. The scFv comprises the 3G6 variable chains in VL-VH orientation. mRNA from 3G6 hybridoma cells was used in
                                                                                                                                                                                                                                                                                                                                                                                                     New fusion protein, useful for inducing host immune response, comprises variable region of light chain of an antibody linked to variable region of antibody, CD28 receptor signaling domain and transmembrane domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Single chain antibody; scFv; antibody; disialoganglioside GD2; antitumour; immunostimulant; neuroblastoma; melanoma; sarcoma; small lung carcinoma; brain tumour; cancer; therapy; imaging;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI;
Sequence 714
                                                                                                                                                                                                                                                                                                                                                                    Disclosure; Page 3; 9pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sadelain M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (SADE/)
(CHEU/)
(KRAU/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20-MAR-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  30-SEP-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        14-FEB-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US2002018783-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (GUOH/)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2002-239251/29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ) SADELAIN M.
) CHEUNG N V.
) KRAUSE A.
I GUO H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Cheung
BP; 174 A; 168 C; 205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               97WO-US004427
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  97US-00940544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ,
V
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Krause
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ą
G; 167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Guo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ħ
T; 0 U; 0
 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gene;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    88
```

occurs

```
RESULT 3
AATB61
ID AATB
XX BACF
XX BCF
XX BCF
XX BT
XX BT
XX BT
XX BT

FT misc
FT misc
FT misc
FT misc
FT misc
FT T misc
FT T misc
FT T misc
FT T T T
XX BCF
FT T T
XX BCF
XX CO-N
XX 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           몽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  scFv; tumour; neuroblastoma; osteosarcoma; soft tissue sarcoma;
tissue imaging; target delivery; toxin; streptavidin;
pro-drug converting enzyme; GD2-targeted lymphocyte; ss.
                                                                                                                                                                                                                                                                                                                                                                                        misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                    misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Single chain
  Recombinant single chain anti-disialoganglioside GD2 antibody - useful to detect tumour cells expressing GD2 and to target therapeutic agents, e.g.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               misc_feature
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Antibody construct; disialoganglioside; GD2; single chain Fv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAT86312 standard;
                                                                                                                                             (SLOK ) SLOAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        301
                                                                                                     VV,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TACGGCTATGCTTTGGACTACTGGGGTCAAGGAACCTCAGTCACCGTCTCCTCA 714
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GCTCTTATGTCCAGACTGAGCATCAGCAAGGACAACTCCAAGAGCCAAGTTTTCTTAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGCTGGAAGCACAAATTATAATTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GTGCAGGTGAAGGAGTCAGGACCTGGCCTTGGTGGCGCCCTCACAGAGAGCCTGTCCATCACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTGGAAATAAAAGGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCCGATCGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGCTGGTGGAAGCACAAATTATAATTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGCACTGTCTCTGGGTTTTCATTAACCAATTATGGTGTACACTGGGTTCGCCAGCCTCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGCACTGTCTCTGGGTTTTTCATTAACCAATTATGGTGTACACTGGGTTCGCCAGCCTCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GTGCAGGTGAAGGAGTCAGGACCTGGCCTGGTGGCGCGCCCTCACAGAGCCTGTCCATCACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTGGAAATAAAAGGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCGGATCGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Larson
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      anti-disialoganglioside GD2 antibody 3G6-scFv-streptavidin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                             KETTERING INST CANCER
                                                                                                                                                                                                                              97WO-US004427
                                                                                                                                                                                                                                                                                                                                                                     /note=
739
/*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                            /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                         /*tag= a
/note= "encodes single chain Fv
715. .73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DNA;
                                                                                                                                                                                                                                                                                                                                                                                                           "linker
                                                                                                                                                                                                                                                                                                                                                  "encodes streptavidin"
                                                                                                                                                                                                                                                                                                                                                                       Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1173
                                                                                                       Ξ
                                                                                                                                                                                                                                                                                                                                                                                                             seqeunce"
                                                                                                       Rivlin
                                                                                                       ᄌ
                                                                                                       Sadelain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         fragment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           of antibody
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      714
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    660
                                                    δ
                                                                                                                                   S
                                                                                                                                                                                   밁
                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                닭
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The present sequence encodes a recombinant single chain peptide, 3G6-scFv-streptavidin. The peptide is an antibody construct comprising the variable regions of the heavy and light chains of an antibody against disaloganglioside (GD2) as a single chain Fv fragment (scFv). GD2 occurs in many tumours types including neuroblastoma, osteosarcomas and other soft tissue sarcomas, medulloblastomas, his grade astrocytomas, melanomas and small cell lung cancer. The peptide can be detectably labelled, preferably with 99m-Tc, for tissue imaging of cells expressing GD2. It can also be used to target delivery of a therapeutic or pretherapeutic agent, such as a toxin, streptavidin (e.g. present sequence) or a pro-drug converting enzyme, to cells expressing GD2. The peptide may further comprise CD8 to facilitate the formation of GD2-targeted CD2-production times to containing the peptide can also be used to target CD2-production times.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 1173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GD2-producing tumour cells
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Disclosure; Page 13; 31pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        toxins,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity
les 714; Conserv
                                                               661
                                                                                                                                                                                      541
                                                                                                                                                                                                                            541
                                                                                                                                                                                                                                                                                                                                                                                                                                   361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121
                           661
                                                                                                                                             601
                                                                                                                                                                                                                                                                      481
                                                                                                                                                                                                                                                                                                            481
                                                                                                                                                                                                                                                                                                                                                    421
                                                                                                                                                                                                                                                                                                                                                                                          421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        to such cells
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGGCAGTCTCCGAAACTGCTGATATACTCTGCATCCAATCGCTACACTGGAGTCCCTGAT
                                              TACGGCTATGCTTTGGACTACTGGGGTCAAGGAACCTCAGTCACCGTCTCCTCA
                                                                                                                                                                                                                                                                                             GGAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGCTGGTGGAAGCACAAATTATAATTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                            GTGCAGGTGAAGGAGTCAGGACCTGGCCTTGGTGGCGCCCTCACAGAGCCTGTCCATCACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTGGAAATAAAAGGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCGGATCGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CGCTTCACTGGCAGTGGATATGGGACGGATTTCACTTTCACCATCAGCACTGTGCAGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGTATTGTGATGACCCCAGACTCCCAAATTCCTGCTTGTATCAGCAGGAGACAGGGTTACC
                                                                                                                              ATGAACAGTCTGCAAACTGATGACACACGCCATGTACTGCTGCCCAGTCGGGGGGGTAAC
                                                                                                                                                                                        GCTCTTATGTCCAGACTGAGCATCAGCAAGGACCAACTCCAAGAGCCCAAGTTTTCTTAAAA
                                                                                                                                                                                                                 GCTCTTATGTCCAGACTGAGCATCAGCAAGGACAACTCCAAGAGCCCAAGTTTTCCTTAAAA
                                                                                                                                                                                                                                                                    GAAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGCTGGTGGAAGCACAAATTATAATTCG
                                                                                                                                                                                                                                                                                                                                                                            TGCACTGTCTCTGGGTTTTCATTAACCAATTATGGTGTACACTGGGTTCGCCAGCCTCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGGCAGTCTCCGAAACTGCTGATATACTCTGCATCCAATCGCTACACTGGAGTCCCTGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATAACCTGCAAGGCCAGTCAGAGTGTGAGTAATGATGTGGCTTGGTACCAACAGAAGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGTATTGTGATGACCCAGACTCCCAAATTCCTGCTTGTATCAGCAGGAGACAGGGTTACC
                                                                                                                                                                                                                                                                                                                                                                                                                                   GTGCAGGTGAAGGAGTCAGGACCTGGCCTGGTGGCGCCCTCACAGAGCCTGTCCATCACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTGGAAATAAAAGGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCGGATCGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATAACCTGCAAGGCCAGTCAGAGTGTGAGTAATGATGTGGCTTGGTACCAACAGAAGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100.0%; ilarity 100.0%; Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A; 334 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 714; DB 2;
Pred. No. 8.1e-198;
; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                <u>و</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                229 T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ď,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 1173;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Other;
```

714

660 660 600 600 540 540 480 480 420 420

360 360 300 300 240 240

180 180 120

120 60

714

<u>,</u>

Gaps

```
RRESULT 4
RRESULT 4
ADQ91081
ID D091081
ADQ91081
  Ś
                                                    밁
                                                                                                 Ś
                                                                                                                                                        밁
                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                    Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                The invention relates to a novel polypeptide construct comprising at least one CDR3 region comprising at least one mutation in a fully defir sequence of 6 amino acids. A construct of the invention has antiinflammatory, antimicrobial, cytostatic, immunomobulator, and immunosuppressive activity. The polypeptide construct, polynucleotide, vector or composition are useful for the prevention, treatment or amelioration of a proliferative disease, a tumorous disease, an inflammatory disease, an immunological disorder, an autoimmune disease an infectious disease in a human subject. The present sequence encodes bispecific single chain antibody scFv EpCAMxCD3 with the M1 mutant
                                                                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          diseases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CDR3; antiinflammatory; antimicrobial; cytostatic; immunomodulator; immunosuppressive; proliferative disease; tumour; inflammatory diseimmunological disorder; autoimmune disease; infectious disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADQ91081 standard; DNA; 1479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Antibody
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      P-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            11-OCT-2002; 2002CA-02403313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              11-OCT-2002; 2002CA-02403313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   11-APR-2004.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CA2403313-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     23-SEP-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADQ91081;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Antibody
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (MICR-) MICROMET
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2004-390792/37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EpCAMxCD3;
       123
                                                                                                                                                                                                                                                          587;
                                                       63
                                                                                                    63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       22; SEQ ID NO 62;
                                                                                                                                                                                                          ω
                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADQ91080.
                                                                                                                                                                                                                                                                                                                                                              1479
     GCAGTCTCCGAAACTGCTGATATACTCTGCATCCAATCGCTACACTGGAGTCCCTGATCG
                                                                                    AACCTGCAAGGCCAGTCAGAGTGTGAGTAATGATGTGGCTTGGTACCAACAGAAGCCAGG
                                                                                                                                                                                   TATTGTGATGACCCAGACTCCCAAATTCCTGCTTGTATCAGCAGGAGACAGGGTTACCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       construct, useful in treating, comprises at least one mutated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SCFV
                                                  CACCTGCAAGGCCAGTCAGAATGTGGGTACTAATGTAGCCTGGTATCAACAGAAACCAGG
                                                                                                                                                        TATCCAGCTGACCCAGTCTCAAAAATTCATGTCCACATCAGTAGGAGACAGGGTCAGCGT
                                                                                                                                                                                                                                                                                                                                                                                                                single chain antibody scFv the anti CD3 region.
                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                         BP; 385 A; 365
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EpCAMxCD3 with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /product= "scFv EpCAMxCD3 region"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
1. .1479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ą
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  note= "No start codon"
                                                                                                                                                                                                                                                                               67.2%;
81.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  80pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                              region.
                                                                                                                                                                                                                                                       Score 480; DB 12;
Pred. No. 1.9e-129;
0; Mismatches 115;
                                                                                                                                                                                                                                                                                                                                                         C; 389 G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ĭ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ₽P
                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   mutant
                                                                                                                                                                                                                                                                                                                                                           340 T; 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       e.g.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   anti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    with
                                                                                                                                                                                                                                                          115;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    , cancer and region.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CD3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3
                                                                                                                                                                                                                                                                                                                                                         U; 0 Other;
                                                                                                                                                                                                                                                                                                       Length 1479;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    mutant
                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   region encoding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 inflammatory
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ij
                                                                                                                                                                                                                                                          18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    anti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CD3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           defined
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DNA.
                                                                                                    122
                                                                                                                                                      62
                                                                                                                                                                                                        62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                          Ν
RRSULT 5
AD091091
ID AD090
XX AD090
XX AD090
XX AD090
XX CDR3
XX IMMU
XX SCFV
XX SCFV
FT CDS
FT CDS
FT CDS
FT FT CDS
FT T CDS

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         皮
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                           Synthetic.
Unidentified
  11-OCT-2002; 2002CA-02403313
                                                  11-OCT-2002;
                                                                                                    11-APR-2004.
                                                                                                                                                      CA2403313-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Antibody scrv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     23-SEP-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADQ91091 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     654
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     534
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         123
                                                  2002CA-02403313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first
                                                                                                                                                                                                                                                                                                                                      .1479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DNA; 1479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     entry)
```

```
CDR3; antiinflammatory; antimicrobial; cytostatic; immunomodulator; immunosuppressive; proliferative disease; tumour; inflammatory disease; immunological disearder; autoimmune disease; infectious disease; scFv EpCAMxCD3; antibody; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGGTAACTACGGCTATGCTTTGGACTACTGGGGTCAAGGAACCTCAGTCACCGTCTCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTTAAAAATGAACAGTCTGCAAACTGATGACACACCCATGTACTACTGTGCCAGTCGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TAATGCAGCTTTCATATCCAGACTGAGCATCAGCAAGGACAATTCCAAGAGCCAAGTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TAATTCGGCTCTTATGTCCAGACTGAGCATCAGCAAGGACAACTCCAAGAGCCAAGTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GTCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTGATATGGAGTGGTGGAAGCACAGACTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGCTGGTGGAAGCACAAATTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CATCACTTGCACTGTCTCTGGGTTTTCATTAACCAATTATGGTGTACACTGGGTTCGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TTCTCAGGTGAAACTGCAGGAGTCAGGACCTGGCCTAGTGCAGCCCTCACAGAGCCTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATCGCAGGTGCAGGTGAAGGAGTCAGGACCTGGCCTGGTGGCGCCCTCACAGAGCCTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GACCAAGCTGGAAATAAAAGGTGGAGGCGGTTCAGGCGAGGTGGCTCTTGGCGGTGGCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGACCTGGCAGTTTATTTCTGTCAGCAGGATTATAGCT------CGCTCGGAGGGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTTCACAGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAATGTGCAGTCTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTTCACTGGCAGTGGATATGGGACGGATTTCACTTTCACCATCAGCACTGTGCAGGCTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCAATCTCCTAAAGCACTGATTTACTCGGCATCCTACCGGTACAGTGGAGTCCCTGATCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTTTAAAATGAACAGTCTGCAAGCTAATGACACAGCCATATATTACTGTGCCAGAATGG-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CATCACCTGCACAGTCTCTGGTTTCTCATTAACTAGCTATGGTGTACACTGGGTTCGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGACTTGGCAGAGTATTTCTGTCAGCAATATAACAGCTATCCGCTCACGTTCGGTGCTGG
                                                                                                                                                                                                                                                                                                                                                                                                          EpCAMxCD3 with M11 mutant
                         /*tag= a
/product= "scFv EpCAMxCD3 with M11 mutant in anti
region"
/note= "No start codon"
                                                                                                                                                      Location/Qualifiers
transl_except=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGAACTGGTCGTTTGCTTACTGGGGCCAAGGGACCACGGTCACCGTCTCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BP
  (pos:625.
                                                                                                                                                                                                                                                                                                                                                                                                          'n
     .627, aa:Ala)
                                                                                                                                                                                                                                                                                                                                                                                                             anti
                                                                                                                                                                                                                                                                                                                                                                                                        CD3 region encoding
                                                                                CD3
                                                                                                                                                                                                                                                                                                                                                                                                             DNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       533
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        713
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       713
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       653
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       593
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       473
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              242
```

```
Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The invention relates to a novel polypeptide construct comprising at least one cDRA region comprising at least one mutation in a fully defin sequence of 6 amino acids. A construct of the invention has antiinflammatory, antimicrobial, cytostatic, immunomodulator, and immunosuppressive activity. The polypeptide construct, polynucleotide, vector or composition are useful for the prevention, treatment or amelioration of a proliferative disease, a tumorous disease, an inflammatory disease, an immunological disorder, an autoimmune disease an infectious disease in a human subject. The present sequence encodes bispecific single chain antibody scFv EpCAMXCD3 with the M11 mutant peptide in the anti CD3 region.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 diseases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Antibody
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (MICR-) MICROMET
                                                                                                                                                                                                                                                                                                                         363
                                                                                                                                                                                                                                                                                                                                                                   354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2004-390792/37
                                                                                                                                                                                            474
                                                                                                                                                                                                                                       423
                                                                                                                                                                                                                                                                               414
                                                                                                                                                                                                                                                                                                                                                                                                             303
                                                                                                                                                                                                                                                                                                                                                                                                                                                        294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                587;
                        594
                                                                  543
                                                                                                          534
                                                                                                                                                       483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       22; SEQ ID NO 72; 80pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                    ATCGCAGGTGCAGGTGAAGGAGTCAGGACCTGGCCTGGTGGCGCCCTCACAGAGCCCTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GCAGTCTCCGAAACTGCTGATATACTCTGCATCCAATCGCTACACTGGAGTCCCTGATCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CACCTGCAAGGCCAGTCAGAATGTGGGTACTAATGTAGCCTGGTATCAACAGAAACCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TATTGTGATGACCCAGACTCCCAAATTCCTGCTTGTATCAGCAGGAGACAGGGTTACCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             construct, useful in treating, comprises at least one mutated
CTTAAAAATGAACAGTCTGCAAACTGATGACAGAGCATGTACTACTGTGCCAGTCGGGG
                                                                                                                                                                                                                                                                 CATCACTTGCACTGTCTCTGGGTTTTTCATTAACCAATTATGGTGTACACTGGGTTCGCCA 473
                                                                                                                                                                                                                                                                                                                                                                                                                                          GACCAAGCTGGAAATAAAAGGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGACTTGGCAGAGTATTTCTGTCAGCAATATAACAGCTATCCGCTCACGTTCGGTGCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGACCTGGCAGTTTATTTCTGTCAGCAGGATTATAGCT------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTTCACTGGCAGTGGATATGGGACGGATTTCACCTTTCACCATCAGCACTGTGCAGGCTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GCAATCTCCTAAAGCACTGATTTACTCGGCATCCTACCGGTACAGTGGAGTCCCTGATCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AACCTGCAAGGCCAGTCAGAGTGTGAGTAATGATGTGGCTTGGTACCAACAGAAGCCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1479 BP; 385 A; 365 C; 387 G;
                                                                                                        TAATTCGGCTCTTATGTCCAGACTGAGCATCAGCAAGGACAACTCCAAGAGCCAAGTTTT
                                                                                                                                                                                            GCCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGCTGGTGGAAGCACAAATTA
                                                                                                                                                                                                                                                                                                                           TTCTCAGGTGAAACTGCAGGAGTCAGGACCTGGCCTAGTGCAGCCCTCACAGAGCCTGTC
                                                                                                                                                                                                                                                                                                                                                                                                             CTTCACAGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAATGTGCAGTCTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TÄTCCAGCTGACCCAGTCTCAAAAATTCATGTCCACATCAGTAGGAGACAGGGTCAGCGT
                                                                                                                                                       GTCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTGATATGGAGTGGTGGAAGCACAGACTA
                                                                                                                                                                                                                                       CATCACCTGCACAGTCTCTGGTTTCTCATTAACTAGCTATGGTGTACACTGGGTTCGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ۶
۵
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 67.2%;
81.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ٥,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 480; DB 12;
Pred. No. 1.9e-129;
0; Mismatches 115;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  342 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 e.g.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               region.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 1479;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CGCTCGGAGGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      inflammatory
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         , at
defined
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      242
                                                                    602
                                                                                                            593
                                                                                                                                                       542
                                                                                                                                                                                            533
                                                                                                                                                                                                                                         482
                                                                                                                                                                                                                                                                                                                           422
                                                                                                                                                                                                                                                                                                                                                                   413
                                                                                                                                                                                                                                                                                                                                                                                                             362
                                                                                                                                                                                                                                                                                                                                                                                                                                                        353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               62
                          653
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            õ
```

밁

Ś

8 밁 δ 밁 á 밁 Ś

ð 밁 ঠ 밁

Ś

TATTGTGATGACCCAGACTCCCAAATTCCTGCTTGTATCAGCAGGAGACAGGGTTACCAT

Query Match Best Local S Matches 587

al Similarity 587; Conserv

Conservative

0

Score 480; DB 12; Pred. No. 1.9e-129; 0; Mismatches 115;

67.2%; 81.5%;

Sequence 1479

BP;

387

A; 364 C;

389 G. 339

Η,

0

ς,

0 Other;

Length 1479; Indels

18;

Gaps

밁

S

밁

ş 밁 ક 밁

Ş

```
RRESULT 6
AD091
AD091
AD091
ACC AD09
AC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                The invention relates to a novel polypeptide construct comprising at least one CDR3 region comprising at least one mutation in a fully defin sequence of 6 amino acids. A construct of the invention has antiinflammatory, antimicrobial, cytostatic, immunomodulator, and immunosuppressive activity. The polypeptide construct, polynucleotide, vector or composition are useful for the prevention, treatment or amelioration of a proliferative disease, a tumorous disease, an inflammatory disease, an immunological disorder, an autoimmune disease an infectious disease in a human subject. The present sequence encodes bispecific single chain antibody scFv EpCAMXCD3 with the M69 mutant peptide in the anti CD3 region.
                                                                                                                                                                                                                                                                                                                                                                                                              Claim 22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     diseases comprises at least one mutated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Antibody construct, useful in treating,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             11-OCT-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       11-APR-2004.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CA2403313-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Synthetic. Unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CDR3; antiinflammatory; antimicrobial; cytostatic; immunomodulator; immunosuppressive; proliferative disease; tumour; inflammatory disease; immunological disorder; autoimmune disease; infectious disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Antibody scrv EpCAMxCD3 with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADQ91105 standard; DNA; 1479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Lanzavecchia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (MICR-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    11-OCT-2002; 2002CA-02403313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           23-SEP-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADQ91105;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2004-390792/37.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Epcamxcd3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADQ91104.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MICROMET
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTTTAAAATGAACAGTCTGCAACCTAATGACACAGCCATATATTACTGTGCCAGAATGG-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGGTAACTACGGCTATGCTTTGGACTACTGGGGTCAAGGAACCTCAGTCACCGTCTCCTC 713
                                                                                                                                                                                                                                                                                                                                                                                                              SEQ ID NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2002CA-02403313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /*tag= a
/product= "scFv EpCAMxCD3 with M69 mutant in anti CD3
region"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  antibody;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ĀG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /note= "No start codon"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     transl_except= (pos:1054.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGAACTGGTCGTTTGCTTACTGGGGCCAAGGGACCACGGTCACCGTCTCCTC
                                                                                                                                                                                                                                                                                                                                                                                                              86; 80pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    M69 mutant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        e.g.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    anti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .1056, aa:Tyr)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        region.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    cancer and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CD3 region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       inflammatory
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 encoding
                                                                                                                                                                                                                                                                                                                            at
defined
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              661
                                                                                                                                                  ç
```

Ś

밁

Ś 뭥 Ş 밁

밁

```
RESULT 7
ADQ91.079
ID ADQ91.079
AC ADQ9
XX
AC ADQ9
XX
AC ADQ9
XX
DE Bisp
XX
CDR3
KW Immu
KW Immu
KW immu
KW immu
KW Synt
COS Synt
OS Synt
OS Synt
COS
FT CDS
FT CDS
FT
XX
XX
CA24
                                                                                                                                                                                                 CDR3; antiinflammatory; antimicrobial; cytostatic; immunomodulator; immunosuppressive; proliferative disease; tumour; inflammatory disease; immunological disorder; autoimmune disease; infectious disease; scFv EpCAMxCD3; antibody; ds.
                                                                                                                                                   Synthetic. Unidentified
                                                                                                                                                                                                                                                                                  Bispecific single chain antibody scFv
                    CA2403313-A1
                                                                                                                                                                                                                                                                                                                   23-SEP-2004
                                                                                                                                                                                                                                                                                                                                                                                   ADQ91079
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 654
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               534
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCAGTCTCCGAAACTGCTGATATACTCTGCATCCAATCGCTACACTGGAGTCCCTGATCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CACCTGCAAGGCCAGTCAGAATGTGGGTACTAATGTAGCCTGGTATCAACAGAAACCAGG
                                                                                                                                                                                                                                                                                                                                                                                   standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGGTAACTACGGCTATGCTTTGGACTACTGGGGTCAAGGAACCTCAGTCACCGTCTCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTTAAAAATGAACAGTCTGCAAACTGATGACACACGCCATGTACTACTGTGCCAGTCGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TAATGCAGCTTTCATATCCAGACTGAGCATCAGCAAGGACAATTCCAAGAGCCAAGTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TAATTCGGCTCTTATGTCCAGACTGAGCATCAGCAAGGACAACTCCAAGAGCCAAGTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GTCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTGATATGGAGTGGTGGAAGCACAGACTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCCTCCAGGAAAGGGTCTGGAGTGGCTGGCAGTAATATGGGCCTGGTGGAAGCACAAATTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CATCACCTGCACAGTCTCTGGTTTCTCATTAACTAGCTATGGTGTACACTGGGTTCGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CATCACTTGCACTGTCTCTGGGTTTTCATTAACCAATTATGGTGTACACTGGGTTCGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TTCTCAGGTGAAACTGCAGGAGTCAGGACCTGGCCTAGTGCAGCCCTCACAGAGCCTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATCGCAGGTGCAGGTGAAGGAGTCAGGACCTGGCCTGGTGGCGCCCCTCACAGAGCCTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GACCAAGCTGGAAATAAAAGGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AGACCTGGCAGTTTATTTCTGTCAGCAGGATTATAGCT-----CGCTCGGAGGGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTTCACTGGCAGTGGATATGGGACGGATTTCACTTTCACCATCAGCACTGTGCAGGCTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCAATCTCCTAAAGCACTGATTTACTCGGCATCCTACCGGTACAGTGGAGTCCCTGATCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AACCTGCAAGGCCAGTCAGAGTGTGTGAGTAATGATGTGGCTTGGTACCAACAGAAGCCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TATCCAGCTGACCCAGTCTCAAAAATTCATGTCCACATCAGTAGGAGACAGGGTCAGCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTTTAAAATGAACAGTCTGCAAGCTAATGACACAGCCATATATTACTGTGCCAGAATGG-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGACTTGGCAGAGTATTTCTGTCAGCAATATAACAGCTATCCGCTCACGTTCGGTGCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTTCACAGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAATGTGCAGTCTGA
                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                Location/Qualifiers
                                                  /product= "scFv EpCAMxCD3"
/note= "No start codon giv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGAACTGGTCGTTTGCTTACTGGGGCCAAGGGACCACGGTCACCGTCTCCTC
                                                                                                                                                                                                                                                                                                                                                                                   DNA;
                                                                                   b
                                                                                                                                                                                                                                                                                                                                                                                   1479
                                                                                                                                                                                                                                                                                                                                                                                   BP.
                                                                                                                                                                                                                                                                                  EpCAMxCD3 SEQ
                                                  given"
                                                                                                                                                                                                                                                                                  ID NO:60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 713
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                713
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                653
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             593
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              533
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              473
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          62
                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                          Ś
                                                                                                               밁
                                                                                                                                         δ
                                                                                                                                                                         밁
                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity
Matches 587; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The invention relates to a novel polypeptide construct comprising at least one CDR3 region comprising at least one mutation in a fully defin sequence of 6 amino acids. A construct of the invention has antiinflammatory, antimicrobial, cytostatic, immunomodulator, and immunosuppressive activity. The polypeptide construct, polynucleotide, vector or composition are useful for the prevention, treatment or amelioration of a proliferative disease, a tumorous disease, an inflammatory disease, an immunological disorder, an autoimmune disease an infectious disease in a human subject. The present sequence encodes bispecific single chain antibody scFv EpCAMxCD3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 1479 BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             P-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Example 7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Antibody
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Lanzavecchia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            11-OCT-2002; 2002CA-02403313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          11-OCT-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (MICR-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2004-390792/37.
)B; ADQ91078.
                  534
                                                  483
                                                                                                                                                414
                                                                                                                                                                                363
                                                                                                                                                                                                                354
                                                                                                                                                                                                                                                  303
                                                                                                                                                                                                                                                                                 294
                                                                                                                                                                                                                                                                                                                 243
                                                                                                                                                                                                                                                                                                                                                 243
                                                                                                                                                                                                                                                                                                                                                                                 183
                                                                                                                                                                                                                                                                                                                                                                                                                183
                                                                                                                                                                                                                                                                                                                                                                                                                                                  123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3 TATTGTGATGACCCAGACTCCCAAATTCCTGCTTGTATCAGCAGGAGACAGGGTTACCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MICROMET AG
TAATTCGGCTCTTATGTCCAGACTGAGCATCAGCAAGGACAACTCCAAGAGCCAAGTTTT
                                                  GTCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTGATATGGAGTGGTGGAAGCACAGACTA
                                                                     GCCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGCTGGTGGAAGCACAAATTA
                                                                                                                                      CATCACTTGCACTGTCTCTGGGTTTTCATTAACCAATTATGGTGTACACTGGGTTCGCCA
                                                                                                                                                                                  TTCTCAGGTGAAACTGCAGGAGTCAGGACCTGGCCTAGTGCAGCCCTCACAGAGCCTGTC
                                                                                                                                                                                                    ATCGCAGGTGCAGGAGTCAAGAGCCTGGCCTGGTGGTGGCCCCTCACAGAGCCTGTC
                                                                                                                                                                                                                                                                             GACCAAGCTGGAAATAAAAGGTGGAGGCGGTTCAGGCGGAGGTGGCTCTTGGCGGTGGCGG
                                                                                                                                                                                                                                                                                                                                       AGACCTGGCAGTTTATTTCTGTCAGCAGGATTATAGCT-----
                                                                                                                                                                                                                                                                                                                                                                                                                CTTCACTGGCAGTGGATATGGGACGGATTTCACTTTCACCATCAGCACTGTGCAGGCTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                  GCAATCTCCTAAAGCACTGATTTACTCGGCATCCTACCGGTACAGTGGAGTCCCTGATCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCAGTCTCCGAAACTGCTGATATACTCTGCATCCAATCGCTACACTGGAGTCCCTGATCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CACCTGCAAGGCCAGTCAGAATGTGGGTACTAATGTAGCCTGGTATCAACAGAAACCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AACCTGCAAGGCCAGTCAGAGTGTGAGTAATGATGTGGCTTGGTACCAACAGAAGCCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          construct, useful in treating, comprises at least one mutated
                                                                                                                   CATCACCTGCACAGTCTCTGGTTTCTCATTAACTAGCTATGGTGTACACTGGGTTCGCCA
                                                                                                                                                                                                                                                  AGACTTGGCAGAGTATTTCTGTCAGCAATATAACAGCTATCCGCTCACGTTCGGTGCTGG
                                                                                                                                                                                                                                                                                                                                                                                   CTTCACAGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAATGTGCAGTCTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TATCCAGCTGACCCAGTCTCAAAAATTCATGTCCACATCAGTAGGAGACAGGGTCAGCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQ ID NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2002CA-02403313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           385 A; 364 C; 389 G; 341 T; 0 U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            67.2%;
81.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        80pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 480; DB J
Pred. No. 1.9e-
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          480; DB 12;
No. 1.9e-129;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CDR3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                115;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 1479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               and
                                                                                                                                                                                                                                                                                                                                                 CGCTCGGAGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               inflammatory
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            at
defined
```

or

N

362

353 302 293 242 242 182 182 122 122 62

542 533 482 473 422 413

593

Ş 밁 Ś 밁 5 밁 S 밁 Ś В Ş В S В Ś

밁

-CGCTCGGAGGGG

```
RESULT 8
ADS99440
ADS99440
ADS99440
ADS9
XX ADS9
XX ADS9
XX CDR:
XX CDR:
XX Immn
KW immn
KW immn
KW immn
KW scPr
OS Synt
CS Unic
XX CL2
XX CL2
XX CL2
XX III-
PT dis
XX CL2
XX III-
PT dis
XX CL3
PP D III-
XX CL3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
    Query Match
Best Local Similarity 81.9
Matches 587; Conservative
                                                                                                                  The invention relates to a novel polypeptide construct comprising at least one CDR3 region comprising at least one mutation in a fully defined sequence of 6 mino acids. A construct of the invention has antiinflammatory, antimicrobial, cytostatic, immunomobulator, and immunosuppressive activity. The polypeptide construct, polynucleotide, vector or composition are useful for the prevention, treatment or amelioration of a proliferative disease, a tumorous disease, an inflammatory disease, an immunological disorder, an autoimmune disease or an infectious disease, an immunological disorder, an autoimmune disease or an infectious disease in a human subject. The present sequence encodes bispecific single chain antibody scfv EpCAMXCD3 with the M13 mutant peptide in the anti CD3 region.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CDR3; antiinflammatory; antimicrobial; cytostatic; immunomodulator; immunosuppressive; proliferative disease; tumour; inflammatory dise immunological disorder; autoimmune disease; infectious disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      11-OCT-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             11-APR-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CA2403313-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Synthetic. '
Unidentified.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    02-DEC-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADS99440;
                                                                                                                                                                                                                                                                                                                                                                                                                               Antibody
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              11-OCT-2002; 2002CA-02403313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADS99440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (MICR-) MICROMET
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2004-390792/37
DB; ADS99439.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Epcamxcd3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             654
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  543
                                                                                   1479
                                                                                                                                                                                                                                                                                                                                                                                                      construct, useful in treating, comprises at least one mutated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BOFV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGGTAACTACGGCTATGCTTTGGACTACTGGGGTCAAGGAACCTCAGTCACCGTCTCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTTAAAAATGAACAGTCTGCAAACTGATGACACAGCCATGTACTACTGTGCCAGTCGGGG
                                                                                                                                                                                                                                                                                                                                                                    SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TAATGCAGCTTTCATATCCAGACTGAGCATCAGCAAGGACAATTCCAAGAGCCAAGTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2002CA-02403313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first entry)
                                                                                   ₽P;
                                                                                                                                                                                                                                                                                                                                                                ID NO 74; 80pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EpCAMxCD3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               antibody; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /product= "scFv EpCAMxCD3 with M13 region" /note= "No start codon"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
1. .1479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     - AGAACTGGTCGTTTGCTTACTGGGGGCCAAGGGGACCACGGTCACCGTCTCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ã
                                                                                   387 A; 364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DNA;
                  67.2%;
81.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1479
    ; Score 480; DB; Pred. No. 1.9e. 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              M13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     쁌
                                                                                 C; 388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            mutant
                                                                                 ູດ
                                                                                   340
                                                                                                                                                                                                                                                                                                                                                                                                      e.g., cancer CDR3 region.
    DB 13;
l.9e-129;
hes 115;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ä
                                                                                 T; 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              anti
                                                                                   Ç,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CD3 region
                                       Length 1479;
      Indels
                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                mutant
                                                                                                                                                                                                                                                                                                                                                                                                                             and
                                                                                   Other;
                                                                                                                                                                                                                                                                                                                                                                                                                             inflammatory
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                in
      18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            encoding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                anti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  disease;
  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CB3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      653
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         713
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     713
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   661
    2
                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 9
ADS99446
      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            멂
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            : 8
                                                                                                                                           Synthetic
                                                                                                                                                                                 immunosuppressive; proliferative di
immunological disorder; autoimmune
scFv EpCAMxCD3; antibody; ds.
                                                                                                                                                                                                    CDR3; antiinflammatory; antimicrobial; cytostatic; immunomodulator; immunosuppressive; proliferative disease; tumour; inflammatory disease; immunological disorder; autoimmune disease; infectious disease;
                                                                                                                                                                                                                                                                                                                                                                                                          ADS99446
                                                                                                                           Unidentified
                                                                                                                                                                                                                                                                                   Antibody scrv EpCAMxCD3 with
                                                                                                                                                                                                                                                                                                                           02-DEC-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              534
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 654
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   س-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTTAAAAATGAACAGTCTGCAAACTGATGACACAGCCATGTACTACTGTGCCAGTCGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TAATTCGGCTCTTATGTCCAGACTGAGCATCAGCAAGGACAACTCCAAGAGCCAAGTTTT
                                                                                                                                                                                                                                                                                                                                                                                                          standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GTCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTGATATGGAGTGGTGGAAGCACAGACTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GCCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGCTGGTGGAAGCACAAATTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CATCACTTGCACTGTCTCTGGGTTTTCATTAACCAATTATGGTGTACACTGGGTTCGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATCGCAGGTGCAGGTGAAGGAGTCAGGACCTGGCCTGGTGGCGCCCCTCACAGAGCCTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCAGTCTCCGAAACTGCTGATATACTCTGCATCCAATCGCTACACTGGAGTCCCTGATCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AACCTGCAAGGCCAGTCAGAGTGTGAGTAATGATGTGGCTTGGTACCAACAGAAGCCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TATTGTGATGACCCAGACTCCCAAATTCCTGCTTGTATCAGCAGGAGACAGGGTTACCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGGTAACTACGGCTATGCTTTGGACTACTGGGGTCAAGGAACCTCAGTCACCGTCTCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CTTTAAAATGAACAGTCTGCAAGCTAATGACACAGCCATATATTACTGTGCCAGAATGG-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TAATGCAGCTTTCATATCCAGACTGAGCATCAGCAAGGACAATTCCAAGAGCCAAGTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CATCACCTGCACAGTCTCTGGTTTCTCATTAACTAGCTATGGTGTACACTGGGTTTCGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TTCTCAGGTGAAACTGCAGGAGTCAGGACCTGGCCTAGTGCAGCCCTCACAGAGCCTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GACCAAGCTGGAAATAAAAGGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGACTTGGCAGAGTATTTCTGTCAGCAATATAACAGCTATCCGCTCACGTTCGGTGCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGACCTGGCAGTTTATTTCTGTCAGCAGGATTATAGCT-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTTCACAGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAATGTGCAGTCTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTTCACTGGCAGTGGATATGGGACGGATTTCACTTTCACCATCAGCACTGTGCAGGCTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CACCTGCAAGGCCAGTCAGAATGTGGGTACTAATGTAGCCTGGTATCAACAGAAAACCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TATCCAGCTGACCCAGTCTCAAAAATTCATGTCCACATCAGTAGGAGACAGGGTCAGCGT
                                                                                                                                                                                                                                                                                                                           (first
/*tag= a
/product= "scFv EpCAMxCD3 with
region"
                                                              Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGAACTGGTCGTTTGCTTACTGGGGCCAAGGGACCACGGTCACCGTCTCCTC
                                                                                                                                                                                                                                                                                                                                                                                                          DNA;
                                                                                                                                                                                                                                                                                                                           entry)
                                                                                                                                                                                                                                                                                                                                                                                                          1479
                                                                                                                                                                                                                                                                                 M31 mutant
                                                                                                                                                                                                                                                                                                                                                                                                        ВP
                                                                                                                                                                                                                                                                                 in anti CD3
                         M31
                      mutant
                                                                                                                                                                                                                                                                                   region
```

ä

anti

G

encoding

713 713 661 653 602 593 542 533 482 473 422 413 362 353 302 293 242 242 182 182 122 122 62

```
5
                           밁
                                                    Ş
                                                                                      밁
                                                                                                               Ş
                                                                                                                                           밁
                                                                                                                                                                    8
                                                                                                                                                                                                      g
                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The invention relates to a novel polypeptide construct comprising at least one CDN3 region comprising at least one mutation in a fully defin sequence of 6 amino acids. A construct of the invention has antiinflammatory, antimicrobial, cytostatic, immunomodulator, and immunosuppressive activity. The polypeptide construct, polynucleotide, vector or composition are useful for the prevention, treatment or amelioration of a proliferative disease, a tumorous disease, an inflammatory disease, an immunological disorder, an autoimmune disease an infectious disease in a human subject. The present sequence encodes bispecific bingle chain antibody scFv EpCAMXCD3 with the M31 mutant peptide in the anti CD3 region.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        11-OCT-2002; 2002CA-02403313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    11-OCT-2002; 2002CA-02403313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   11-APR-2004.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CA2403313-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            diseases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      P-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2004-390792/37
DB; ADS99445.
                                                                                                                                                                                                                                                               183
 474
                            423
                                                         414
                                                                                      363
                                                                                                                   354
                                                                                                                                               303
                                                                                                                                                                            294
                                                                                                                                                                                                         243
                                                                                                                                                                                                                                    243
                                                                                                                                                                                                                                                                                            183
                                                                                                                                                                                                                                                                                                                         123
                                                                                                                                                                                                                                                                                                                                                    123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  587;
                                                                                                                                                                                                                                                                                                                                                                                 63
                                                                                                                                                                                                                                                                                                                                                                                                             63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                22; SEQ ID NO 80; 80pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                          w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MICROMET
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1479 BP; 384 A; 364 C; 391 G; 340 T; 0 U; 0 Other;
                                              CATCACTTGCACTGTCTCTGGGTTTTCATTAACCAATTATGGTGTACACTGGGTTCGCCA
                                                                                                         ATCGCAGGTGCAGGTGAAGGAGTCAGGACCTGGCCTGGTGGCGCCCCTCACAGAGCCCTGTC
                                                                                                                                                                          GACCAAGCTGGAAATAAAAGGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCGG
                                                                                                                                                                                                                                                                                                                                                                                  CACCTGCAAGGCCAGTCAGAATGTGGGTACTAATGTAGCCTGGTATCAACAGAAACCAGG
                                                                                                                                                                                                                                                                                                                                                                                                            AACCTGCAAGGCCAGTCAGAGTGTGAGTAATGATGTGGCTTGGTACCAACAGAAGCCAGG 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TATTGTGATGACCCAGACTCCCAAATTCCTGCTTGTATCAGCAGGAGACAGGGTTACCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            construct,
 GCCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGCTGGTGGAAGCACAAATTA
                                                                                       TTCTCAGGTGAAACTGCAGGAGTCAGGACCTGGCCTAGTGCAGCCCTCACAGAGCCTGTC
                                                                                                                                               AGACCTGGCAGTTTATTTCTGTCAGCAGGATTATAGCT------
                                                                                                                                                                                                                                                                 CTTCACAGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAATGTGCAGTCTGA
                                                                                                                                                                                                                                                                                 CTTCACTGGCAGTGGATATGGGACGGATTTCACTTTCACCATCAGCACTGTGCAGGCTGA 242
                                                                                                                                                                                                                                                                                                                         GCAATCTCCTAAAGCACTGATTTACTCGGCATCCTACCGGTACAGTGGAGTCCCTGATCG
                                                                                                                                                                                                                                                                                                                                                    GCAGTCTCCGAAACTGCTGATATACTCTGCATCCAATCGCTACACTGGAGTCCCTGATCG
                                                                                                                                                                                                                                                                                                                                                                                                                                         TATCCAGCTGACCCAGTCTCAAAAATTCATGTCCACATCAGTAGGAGACAGGGTCAGCGT
                            CATCACCTGCACAGTCTCTGGTTTCTCATTAACTAGCTATGGTGTACACTGGGTTCGCCA
                                                                                                                                                                                                         AGACTTGGCAGAGTATTTCTGTCAGCAATATAACAGCTATCCGCTCACGTTCGGTGCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             at least
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            useful in treating,
at least one mutated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              67.2%;
81.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             start codon"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pred. No. 1.9e-12y;
); Mismatches 115;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 480; DB 13;
Pred. No. 1.9e-129;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             cDR3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            , cancer and region.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 1479;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                    CGCTCGGAGGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           inflammatory
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      at
defined
                                                                                                                                                                                                                                                               242
                                                         473
                                                                                                                                                                                                                                                                                                                                                     182
 533
                                                                                      422
                                                                                                                   413
                                                                                                                                               362
                                                                                                                                                                            353
                                                                                                                                                                                                         302
                                                                                                                                                                                                                                                                                                                         182
                                                                                                                                                                                                                                                                                                                                                                                  122
                                                                                                                                                                                                                                                                                                                                                                                                                                          62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 or
P
```

```
RESULT 10
ADS99434
ID 9A24
ADS9942
XX ADS99
XX O2-DE
XX CDR3;
XW immunn
XW CA240
YN CA240

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                    The invention relates to a novel polypeptide construct comprising at least one CDR3 region comprising at least one mutation in a fully defir sequence of 6 amino acids. A construct of the invention has antiinflammatory, antimicrobial, cytostatic, immunomodulator, and immunosuppressive activity. The polypeptide construct, polynucleotide, vector or composition are useful for the prevention, treatment or amelioration of a proliferative disease, a tumorous disease, an inflammatory disease, an immunological disorder, an autoimmune disease an infectious disease, an immunological disorder, an autoimmune disease bispecific single chain antibody scfv EpCAMxCD3 with the M9 mutant peptide in the anti CD3 region.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CDR3; antiinflammatory; antimicrobial; cytostatic; immunosuppressive; proliferative disease; tumour; immunological disorder; autoimmune disease; infecti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    02-DEC-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADS99434;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADS99434 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Lanzavecchia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   11-OCT-2002; 2002CA-02403313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     11-OCT-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      11-APR-2004.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CA2403313-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Antibody scFv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (MICR-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Epcamxcd3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2004-390792/37.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              534
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                654
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                483
                                                                                                                                                                                                                                                                                                                                22; SEQ ID NO 68;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MICROMET
                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADS99433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TAATTCGGCTCTTATGTCCAGACTGAGCATCAGCAAGGACAACTCCAAGAGCCAAGTTTT
                                                                                                                                                                                                                                                                                                                                                                            construct, useful in treating, comprises at least one mutated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGGTAACTACGGCTATGCTTTGGACTACTGGGGTCAAGGAACCTCAGTCACCGTCTCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTTAAAAATGAACAGTCTGCAAACTGATGACACAGCCATGTACTACTGTGCCAGTCGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TAATGCAGCTTTCATATCCAGACTGAGCATCAGCAAGGACAATTCCAAGAGCCAAGTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTTTAAAATGAACAGTCTGCAAGCTAATGACACAGCCATATATTACTGTGCCAGAATGG-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2002CA-02403313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /*tag= a
/product= "scFv EpCAMxCD3
region"
/note= "No start codon"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        antibody;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
1. .1479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       გ
G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 - AGAACTGGTCGTTTGCTTACTGGGGCCAAGGGACCACGGTCACCGTCTCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DNA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    entry)
                                                                                                                                                                                                                                                                                                                             80pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     M9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     mutant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ħ
                                                                                                                                                                                                                                                                                                                                                                                    CDR3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     anti CD3
                                                                                                                                                                                                                                                                                                                                                                                 region
                                                                                                                                                                                                                                                                                                                                                                                                        cancer and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          M9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            inflammatory dise
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          mutant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     region
                                                                                                                                                                                                                                                                                                                                                                                                           inflammatory
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   encoding DNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          anti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             G
                                                                                                                                                                                                                                                            at
defined
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   713
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      653
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   593
                                                                                                        õ
```

S

```
RESULT 11
ADS99450
ID ADS99
XX
AC ADS99
XX
IMMUT
AC ADCED
AC ADCED
AC ACCED
AC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches 587;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local
                                                                                                 CDR3; antiinflammatory; antimicrobial; cytostatic; immunosuppressive; proliferative disease; tumour; immunological disorder; autoimmune disease; infecti
                     Synthetic.
Unidentified
                                                                                                                                                                                  Antibody
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 1479
                                                                                                                                                                                                                                                                                                           ADS99450
                                                                                EpCAMxCD3;
                                                                                                                                                                                                                                                                                                                                                                                                             662
                                                                                                                                                                                                                                                                                                                                                                                                                                                   654
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  534
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                                                    BCFV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTTCACTGGCAGTGGATATGGGACGGATTTCACTTTCACCATCAGCACTGTGCAGGCTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AACCTGCAAGGCCAGTCAGAGTGTGAGTAATGATGTGGCTTGGTACCAACAGAAGCCAGG
                                                                                                                                                                                                                                                                                                           standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                           GGGTAACTACGGCTATGCTTTGGACTACTGGGGTCAAGGAACCTCAGTCACCGTCTCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GCCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGCTGGTGGAAGCACAAATTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CATCACTTGCACTGTCTCTGGGTTTTCATTAACCAATTATGGTGTACACTGGGTTCGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATCGCAGGTGCAGGTGAAGGAGTCAGGACCTGGCCTGGTGGCGCCCTCACAGAGCCTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GACCAAGCTGGAAATAAAAGGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCAATCTCCTAAAGCACTGATTTACTCGGCATCCTACCGGTACAGTGGAGTCCCTGATCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GCAGTCTCCGAAACTGCTGATATACTCTGCATCCAATCGCTACACTGGAGTCCCTGATCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TATTGTGATGACCCAGACTCCCAAATTCCTGCTTGTATCAGCAGGAGACAGGGTTACCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTTAAAAATGAACAGTCTGCAAACTGATGACACAGCCATGTACTACTGTGCCAGTCGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GTCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTGATATGGAGTGGTGGAAGCACAGACTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CATCACCTGCACAGTCTCTGGTTTCTCATTAACTAGCTATGGTGTACACTGGGTTCGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TTCTCAGGTGAAACTGCAGGAGTCAGGACCTGGCCTAGTGCAGCCCTCACAGAGCCTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGACTTGGCAGAGTATTTCTGTCAGCAATATAACAGCTATCCGCTCACGTTCGGTGCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGACCTGGCAGTTTATTTCTGTCAGCAGGATTATAGCT-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TATCCAGCTGACCCAGTCTCAAAAATTCATGTCCACATCAGTAGGAGACAGGGTCAGCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TAATGCAGCTTTCATATCCAGACTGAGCATCAGCAAGGACAATTCCAAGAGCCAAGTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TAATTCGGCTCTTATGTCCAGACTGAGCATCAGCAAGGACAACTCCAAGAGCCAAGTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                        (first
                                                                                                                                                                                  EpCAMxCD3 with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BP; 386 A; 364 C; 389 G; 340 T; 0 U; 0 Other;
                                                                                  antibody; ds
                                                                                                                                                                                                                                                                                                           DNA;
                                                                                                                                                                                                                          entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        67.2%;
81.5%;
                                                                                                                                                                                                                                                                                                           1479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       <u>,,</u>
                                                                                                                                                                                  M65 mutant in anti CD3 region encoding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 480; DB 13;
Pred. No. 1.9e-129;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches 115;
                                                                                                     infectious
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 1479;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                         inflammatory
                                                                                                     disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -CGCTCGGAGGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       18;
                                                                                                                         disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    473
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    653
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  593
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   533
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        62
                                                  S
                                                                                                                                                                              밁
                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                                                                               맑
                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                     밁
                                                                                                     밁
                                                                                                                                 8
                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The invention relates to a novel polypeptide construct comprising at least one CD3 region comprising at least one mutation in a fully defin sequence of 6 mino acids. A construct of the invention has antiinflammatory, antimicrobial, cytostatic, immunomodulator, and immunosuppressive activity. The polypeptide construct, polynucleotide; vector or composition are useful for the prevention, treatment or amelioration of a proliferative disease, a tumorous disease, an inflammatory disease, an immunological disorder, an autoimmune disease an infectious disease in a human subject. The present sequence encodes bispecific single chain antibody scFv EpCAMXCD3 with the M65 mutant peptide in the anti CD3 region.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Antibody
diseases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Lanzavecchia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 1479 BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    11-OCT-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           11-OCT-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     11-APR-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CA2403313-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (MICR-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local
                       363
                                                             354
                                                                                                     303
                                                                                                                                            294
                                                                                                                                                                                  243
                                                                                                                                                                                                                          243
                                                                                                                                                                                                                                                                   183
                                                                                                                                                                                                                                                                                                         183
                                                                                                                                                                                                                                                                                                                                                 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               587;
                                                                                                                                                                                                                                                                                                                                                                                        123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    22;
                                                                                                                                                                                                                                                                                                                                                                                                                                  63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       W
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MICROMET
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                ATCGCAGGTGCAGGTGAAGGAGTCAGGACCTGGCCTGGTGGCGCCCCTCACAGAGCCTGTC
                                                                                                                           GACCAAGCTGGAAATAAAAGGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCGG
                                                                                                                                                                                                                                                                                                                                                 GCAATCTCCTAAAGCACTGATTTACTCGGCATCCTACCGGTACAGTGGAGTCCCTGATCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AACCTGCAAGGCCAGTCAGAGTGTGAGTAATGATGTGGCTTGGTACCAACAGAAGCCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TATTGTGATGACCCCAGACTCCCAAATTCCTGCTTGTATCAGCAGGAGACAGGGTTACCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             construct, useful in treating, comprises at least one mutated
                                                                                                     AGACTTGGCAGAGTATTTCTGTCAGCAATATAACAGCTATCCGCTCACGTTCGGTGCTGG
                                                                                                                                                                                                           AGACCTGGCAGTTTATTTCTGTCAGCAGGATTATAGCT-----
                                                                                                                                                                                                                                                                   CTTCACAGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAATGTGCAGTCTGA
                                                                                                                                                                                                                                                                                                     CTTCACTGGCAGTGGATATGGGACGGATTTCACTTTCACCATCAGCACTGTGCAGGCTGA
                                                                                                                                                                                                                                                                                                                                                                                          GCAGTCTCCGAAACTGCTGATATACTCTGCATCCAATCGCTACACTGGAGTCCCTGATCG
                                                                                                                                                                                                                                                                                                                                                                                                                                  CACCTGCAAGGCCAGTCAGAATGTGGGTACTAATGTAGCCTGGTATCAACAGAAAACCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TATCCAGCTGACCCAGTCTCAAAAATTCATGTCCACATCAGTAGGAGACAGGGTCAGCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQ ID NO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2002CA-02403313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2002CA-02403313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /*tag= a
/product=
region"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
1. .1479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ត្ត
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              383 A; 365 C; 390 G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  84; 80pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                67.2%;
81.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "No
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "BCFV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      start
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 480; DB 1
Pred. No. 1.9e-1
0; Mismatches 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Epcamxcd3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                341 T; 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CDR3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 115;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             region.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     129;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            M65 mutant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                U; 0 Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 1479;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                and
                                                                                                                                                                                                                  ·CGCTCGGAGGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  inflammatory
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              in anti CD3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           at
defined
```

ဓ္

Ś 문 ર્ 밁 ર્ક 밁 ঠ 밁 δ 밁 ঠ 밁 S 밁 S 밁 S 밁 S 밁 ঠ 밁 ð

밁

413 362 353 302 293 242 242 182 182 122 122 62

```
RESULT 12
ADS99430
ID ADS99430
XX ADS99430
XX ADS99430
XX D2-DE
XX CDR3;
XW CDR3;
XW immun
KW immun
KW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               á
least one CDR3 region comprising at least one mutation in a fully sequence of 6 amino acids. A construct of the invention has antiinflammatory, antimicrobial, cytostatic, immunomodulator, and immunosuppressive activity. The polypeptide construct, polynucleot vector or composition are useful for the prevention, treatment amelioration of a proliferative disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Synthetic. Unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Immunosuppressive; proliferative disease; tumour; inflammatory immunological disorder; autoimmune disease; infectious disease; scFv EpCAMxCD3; antibody; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                         11-OCT-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               11-APR-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CA2403313-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Antibody
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         02-DEC-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADS99430
                                                                                                                                                                                                                                                                                                                                                                                                                   (MICR-)
                                                                                                                                                                                                                                                                                                                          2004-390792/37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  654
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          534
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     antiinflammatory;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -2002;
                                                                                                                                                                                                                                                                                                                                                                                                                MICROMET
                                                                                                                                                                                                                                                                                                        ADS99429
                                                                                                                                                                                                                                    construct,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SCFV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGGTAACTACGGCTATGCTTTGGACTACTGGGGTCAAGGAACCTCAGTCACCGTCTCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TAATGCAGCTTTCATATCCAGACTGAGCATCAGCAAGGACAATTCCAAGAGCCAAGTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GTCTCCAGGAAAGGGTCTGGAGTGGCTGGAGTGATATGGAGTGGTGGAAGCACAGACTA
                                                                                                                                                                                           SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTTTAAAATGAACAGTCTGCAAGCTAATGACACAGCCATATATTACTGTGCCAGAATGG-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTTAAAAATGAACAGTCTGCAAACTGATGACACAGCCATGTACTACTGTGCCAGTCGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TAATTCGGCTCTTATGTCCAGACTGAGCATCAGCAAGGACAACTCCAAGAGCCAAGTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGCTGGTGGAAGCACAAATTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CATCACCTGCACAGTCTCTGGTTTCTCATTAACTAGCTATGGTGTACACTGGGTTCGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CATCACTTGCACTGTCTCTGGGTTTTCATTAACCAATTATGGTGTACACTGGGTTCGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                         2002CA-02403313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2002CA-02403313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first
                                                                                                                                                                                           ID NO 64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EpCAMxCD3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /product= "scFv
region"
/note= "No start
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /*tag=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -AGAACTGGTCGTTTGCTTACTGGGGCCAAGGGACCACGGTCACCGTCTCCTC
                                                                                                                                                                                                                                      at
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              tory; antimicrobial; cytostatic;
proliferative disease; tumour; i
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DNA;
                                                                                                                                                                                                                                    useful in treating, at least one mutated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         entry)
                                                                                                                                                                                       80pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   start
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Σ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ВP
                                                                                                                                                                                         English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              mutant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EpCAMxCD3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 codon"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ä.
                                                                                                                                                                                                                                    e.g.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              anti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            with
                                                                                                                                                                                                                                  cancer and region.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         <u>₹</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CD3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         mutant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   immunomodulator;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           region
                                    t, polynucleotide,
treatment or
                                                                                                                                                                                                                                                         inflammatory
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ii
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         encoding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       anti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              disease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         G
                                                                                                                          at
defined
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     713
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             713
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               653
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   593
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         533
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               473
```

```
S
                                                   맑
                                                                         Ś
                                                                                                       밁
                                                                                                                             S
                                                                                                                                                              밁
                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                      Ś
吊
                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SSSS X &
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            inflammatory disease, an immunological disorder, an autoimmune an infectious disease in a human subject. The present sequence bispecific single chain antibody scFv EpCAMXCD3 with the M4 mut peptide in the anti CD3 region.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 1479 BP;
                                                                               594
                                                                                                          543
                                                                                                                                                                                         474
                                                                                                                                                                                                                   423
                                                                                                                                                                                                                                              414
                                                                                                                                                                                                                                                                                                                                303
                        654
                                                                                                                                  534
                                                                                                                                                               483
                                                                                                                                                                                                                                                                          363
                                                                                                                                                                                                                                                                                                     354
                                                                                                                                                                                                                                                                                                                                                          294
                                                                                                                                                                                                                                                                                                                                                                                                                243
                                                                                                                                                                                                                                                                                                                                                                                                                                           183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                587;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
               GGGTAACTACGGCTATGCTTTTGGACTACTGGGGGTCAAGGAACCTCAGTCACCGTCTCCTC
                                                                  CTTAAAAATGAACAGTCTGCAAACTGATGACACAGCCATGTACTACTGTGCCAGTCGGGG
                                                                                                         TAATGCAGCTTTCATATCCAGACTGAGCATCAGCAAGGACAATTCCAAGAGCCAAGTTTT
                                                                                                                                    TAATTCGGCTCTTATGTCCAGACTGAGCATCAGCAAGGACAACTCCAAGAGCCAAGTTTT
                                                                                                                                                              GTCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTGATATGGAGTGGTGGAAGCACAGACTA
                                                                                                                                                                                      GCCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGCTGGTGGAAGCACAAATTA
                                                                                                                                                                                                                   CATCACCTGCACAGTCTCTGGTTTCTCATTAACTAGCTATGGTGTACACTGGGTTCGCCA
                                                                                                                                                                                                                                    CATCACTTGCACTGTCTCTGGGTTTTCATTAACCAATTATGGTGTACACTGGGTTCGCCA
                                                                                                                                                                                                                                                                          TTCTCAGGTGAAACTGCAGGAGTCAGGACCTGGCCTAGTGCAGCCCTCACAGAGCCTGTC
                                                                                                                                                                                                                                                                                        ATCGCAGGTGCAGGTGAAGGAGTCAGGACCTGGCCTGGTGGCGCCCTCACAGAGCCTGTC
                                                                                                                                                                                                                                                                                                                                GACCAAGCTGGAAATAAAAGGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCGG
                                                                                                                                                                                                                                                                                                                                                                                                       AGACCTGGCAGTTTATTTCTGTCAGCAGGATTATAGCT------
                                                                                                                                                                                                                                                                                                                                                                                                                                          CTTCACAGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAATGTGCAGTCTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCAATCTCCTAAAGCACTGATTTACTCGGCATCCTACCGGTACAGTGGAGTCCCTGATCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GCAGTCTCCGAAACTGCTGATATACTCTGCATCCAATCGCTACACTGGAGTCCCTGATCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CACCTGCAAGGCCAGTCAGAATGTGGGTACTAATGTAGCCTGGTATCAACAGAAACCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AACCTGCAAGGCCAGTCAGAGTGTGAGTAATGATGTGGCTTGGTACCAACAGAAGCCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TATTGTGATGACCCAGACTCCCAAATTCCTGCTTGTATCAGCAGGAGACAGGGTTACCAT
                                                   CTTTAAAATGAACAGTCTGCAAGCTAATGACACAGCCATATATTACTGTGCCAGAATGG-
                                                                                                                                                                                                                                                                                                                                                                                      AGACTTGGCAGAGTATTTCTGTCAGCAATATAACAGCTATCCGCTCACGTTCGGTGCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTTCACTGGCAGTGGATATGGGACGGATTTCACTTTCACCATCAGCACTGTGCAGGCTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TATCCAGCTGACCCAGTCTCAAAAATTCATGTCCACATCAGTAGGAGACAGGGTCAGCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
AGAACTGGTCGTTTGCTTACTGGGGCCAAGGGACCACGGTCACCGTCTCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     385 A; 364 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             67.2%;
81.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pred. No. 1.9e
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            480;
No. 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     340 T; 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 13;
.9e-129;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 115;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     u;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Other;
                                                                                                                                                                                                                                                                                                                                                                                                              CGCTCGGAGGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           disease
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                   661
                                                                                                                                  593
                                                                                                                                                               542
                                                                                                                                                                                                                                              473
713
                                                                               653
                                                                                                          602
                                                                                                                                                                                         533
                                                                                                                                                                                                                   482
                                                                                                                                                                                                                                                                          422
                                                                                                                                                                                                                                                                                                                                362
                                                                                                                                                                                                                                                                                                                                                         353
                                                                                                                                                                                                                                                                                                                                                                                      302
                                                                                                                                                                                                                                                                                                                                                                                                                293
                                                                                                                                                                                                                                                                                                                                                                                                                                           242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                N
```

ADS99442 standard; DNA; 1479

₽P

first entry)

Antibody scFv EpcAMxcD3 with M14 mutant in anti CD3 region

DNA.

RESULT 13
ADS99442
ID ADS994
XX ADS99
XX ADS99
XX DE O2-DE
XX V2-DE
XX V2-DE
XX DE Antik
XX CDR3;
XW immur
XW immur immunosuppressive; proliferative disease; tumour; immunological disorder; autoimmune disease. infectious inflammatory immunomodulator; disease;

```
밁
                                                                                                                                                                                                                                                                                                 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     문
                           δ
                                                                 밁
                                                                                         ઇ
                                                                                                                            문
                                                                                                                                                            S
                                                                                                                                                                                                  문
                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                   吊
                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local S
Matches 587
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 least one CDR3 region comprising at least one mutation in a fully define sequence of 6 amino acids. A construct of the invention has antiinflammatory, antimicrobial, cytostatic, immunomodulator, and immunosuppressive activity. The polypeptide construct, polymucleotide, vector or composition are useful for the prevention, treatment or amelioration of a proliferative disease, a tumorous disease, an inflammatory disease, an immunological disorder, an autoimmune disease an infectious disease in a human subject. The present sequence encodes bispecific single chain antibody scFv EpCAMxCD3 with the M14 mutant peptide in the anti CD3 region.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Antibody
diseases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        11-OCT-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 22; SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Lanzavecchia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         11-OCT-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           11-APR-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CA2403313-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8CFV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Synthetic.
Unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (MICR-) MIGROMET
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2004-390792/37.
 303
                                294
                                                                 243
                                                                                                243
                                                                                                                                 183
                                                                                                                                                                 183
                                                                                                                                                                                                    123
                                                                                                                                                                                                                                   123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EpCAMxCD3;
                                                                                                                                                                                                                                                                  63
                                                                                                                                                                                                                                                                                                                                                                                                   al Similarity
587; Conserv
                                                                                                                                                                                                                                                                                                   63
                                                                                                                                                                                                                                                                                                                                   w
                                                                                                                                                                                                                                                                                                                                                                  w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADS99441.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     construct, useful in treating, comprises at least one mutated
                                                                                                                                                  CTTCACTGGCAGTGGATATGGGACGGATTTCACTTTCACCATCAGCACTGTGCAGGCTGA
                                                                                                                                                                                                                       GCAGTCTCCGAAACTGCTGATATACTCTGCATCCAATCGCTACACTGGAGTCCCTGATCG
                                                                                                                                                                                                                                                                    CACCTGCAAGGCCAGTCAGAATGTGGGTACTAATGTAGCCTGGTATCAACAGAAACCAGG
                                                                                                                                                                                                                                                                                        AACCTGCAAGGCCAGTCAGAGTGTGTGAGTAATGATGTGGCTTGGTTACCAACAGAAGCCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1479
                  GACCAAGCTGGAAATAAAAGGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCGG
                                                                                      AGACCTGGCAGTTTATTTCTGTCAGCAGGATTATAGCT-----CGCTCGGAGGGGGG
                                                                                                                                                                                                    GCAATCTCCTAAAGCACTGATTTACTCGGCATCCTACCGGTACAGTGGAGTCCCTGATCG
                                                                                                                                                                                                                                                                                                                                     TATCCAGCTGACCCAGTCTCAAAAATTCATGTCCACATCAGTAGGAGACAGGGTCAGCGT
                                                                                                                                                                                                                                                                                                                                                                  TATTGTGATGACCCAGACTCCCAAATTCCTGCTTGTATCAGCAGGAGACAGGGTTACCAT
 CTTCACAGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAATGTGCAGTCTGA
                                                                 AGACTTGGCAGAGTATTTCTGTCAGCAATATAACAGCTATCCGCTCACGTTCGGTGCTGG
                                                                                                                                                                                                                                                                                                                                                                                                   67.2%;
llarity 81.5%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2002CA-02403313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2002CA-02403313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   B₽;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ID NO 76; 80pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            antibody;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          region"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /*tag= a
/product= "scFv EpCAMxCD3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note= "No start codon"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   385 A; 364 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            gb
                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                   Score 480; DB 13;
Pred. No. 1.9e-129;
0; Mismatches 115;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   389 G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       e.g.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   T; 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     region.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           M14 mutant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ς.
                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 1479;
                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        inflammatory
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ín
                                                                                                                                                                                                                                                                                                                                                                                                     18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             anti CD3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      , at
defined
                                                                                                                                                                   242
                                                                                                                                                                                                    182
                                                                                                                                                                                                                                     182
                                                                                                                                                                                                                                                                    122
                                                                                                                                                                                                                                                                                                                                     62
                                353
                                                                 302
                                                                                                  293
                                                                                                                                    242
                                                                                                                                                                                                                                                                                                    122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      õ
 RESULT 14
ADS99432
ID ADS99
XX ADS99
XX ADS99
XX O2-DE
XX O2-DE
XX IMMULT
KW IMMULT
CDS
FT CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        გ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         á
   The invention relates least one CDR3 region
                                                                                                                                    WPI; 2004-390792/37.
P-PSDB; ADS99431.
                                                                                                                                                                                                                                                                                                                    11-APR-2004.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Synthetic.
Unidentified.
                                                   Claim
                                                                                                  Antibody
                                                                                                                                                                                   Lanzavecchia
                                                                                                                                                                                                                   (MICR-) MICROMET
                                                                                                                                                                                                                                                                                   11-OCT-2002;
                                                                                                                                                                                                                                                                                                                                                      CA2403313-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       02-DEC-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADS99432;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          534
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         654
                                                   22;
                                                   SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (first
                                                   ID NO
 region
                                                                                                                                                                                                                       A
```

```
CDR3; antiinflammatory; antimicrobial; cytostatic; immunomodulator; immunosuppressive; proliferative disease; tumour; inflammatory disease; immunological disorder; autoimmune disease; infectious disease; scFv EpCAMxCD3; antibody; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADS99432 standard; DNA; 1479
                                                                                                                                                                                                                                                  11-OCT-2002; 2002CA-02403313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Antibody scFv EpCAMxCD3 with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     354 ATCGCAGGTGCAGGTGAAGGAGTCAGGACCTGGCCTGGTGGCGCCCTCACAGAGCCTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGCTGGTGGAAGCACAAATTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CATCACTTGCACTGTCTCTGGGTTTTCATTAACCAATTATGGTGTACACTGGGTTCGCCA
                                      construct, useful in treating, comprises at least one mutated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTTAAAAATGAACAGTCTGCAAACTGATGACACAGCCATGTACTACTGTGCCAGTCGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TAATTCGGCTCTTATGTCCAGACTGAGCATCAGCAAGGACAACTCCAAGAGCCAAGTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GTCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTGATATGGAGTGGTGGAAGCACAGACTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CATCACCTGCACAGTCTCTGGTTTCTCATTAACTAGCTATGGTGTACACTGGGTTCGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGGTAACTACGGCTATGCTTTTGGACTACTGGGGTCAAGGAACCTCAGTCACCGTCTCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTTTAAAATGAACAGTCTGCAAGCTAATGACACAGCCATATATTACTGTGCCAGAATGG-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TAATGCAGCTTTCATATCCAGACTGAGCATCAGCAAGGACAATTCCAAGAGCCAAGTTTT
                                                                                                                                                                                                                                                                                          2002CA-02403313
                                                                                                                                                                                                                                                                                                                                                                                                                                   /*tag= a
/product= "scFv |
region"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                    'note= "No start codon"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGAACTGGTCGTTTGCTTACTGGGGCCAAGGGACCACGGTCACCGTCTCCTC
66; 80pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                M7 mutant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BP.
  English
                                                                                                                                                                                                                                                                                                                                                                                                                                                           EpCAMxCD3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              'n
                                          e.g.,
CDR3
                                                                                                                                                                                                                                                                                                                                                                                                                                                           with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                anti CD3
                                        region.
                                                                                                                                                                                                                                                                                                                                                                                                                                                             3
                                                                                                                                                                                                                                                                                                                                                                                                                                                             mutant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              region encoding
                                                                and
                                                                                                                                                                                                                                                                                                                                                                                                                                                             'n
                                                                inflammatory
                                                                                                                                                                                                                                                                                                                                                                                                                                                             anti
                                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DNA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        533
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       473
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        713
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       653
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      593
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  422
```

to a novel polypeptide construct comprising at least one mutation

comprising in a fully

at defined

```
RESULT 15
ADS99444
ID ADS99
XX
AC ADS99
XX
AC ADS99
XX
DT 02-DE
XX
                                                                                                                                                             Ś
                                                                                                                                                                                           밁
                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SSSSSSSSSK&
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local S
Matches 587
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              antiinflammatory, antimicrobial, cytostatic, immunomodulator, and immunosuppressive activity. The polypeptide construct, polypucleotide, vector or composition are useful for the prevention, treatment or amelioration of a proliferative disease, a tumorous disease, an inflammatory disease an immunological disorder, an autoimmune disease an infectious disease in a human subject. The present sequence encodes bispecific single chain antibody scFv EpcAMxCD3 with the M7 mutant peptide in the anti CD3 region.
               02-DEC-2004
                                          ADS99444;
                                                                  ADS99444
                                                                                                                                      662
                                                                                                                                                                654
                                                                                                                                                                                           603
                                                                                                                                                                                                                      594
                                                                                                                                                                                                                                                 543
                                                                                                                                                                                                                                                                         534
                                                                                                                                                                                                                                                                                                    483
                                                                                                                                                                                                                                                                                                                                474
                                                                                                                                                                                                                                                                                                                                                           423
                                                                                                                                                                                                                                                                                                                                                                                    414
                                                                                                                                                                                                                                                                                                                                                                                                               363
                                                                                                                                                                                                                                                                                                                                                                                                                                         354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                al Similarity
587; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ω
                                                                                                                                                                                                                                                                TAATTCGGCTCTTATGTCCAGACTGAGCATCAGCAAGGACAACTCCAAGAGCCAAGTTTT
                                                                                                                                                                                                                                                                                                                                                                                CATCACTTGCACTGTCTCTGGGTTTTCATTAACCAATTATGGTGTACACTGGGTTTCGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCAGTCTCCGAAACTGCTGATATACTCTGCATCCAATCGCTACACTGGAGTCCCTGATCG
                                                                                                                                                                                                         CTTAAAAATGAACAGTCTGCAAACTGATGACACAGCCATGTACTGCTACTGTGCCAGTCGGGG
                                                                                                                                                                                                                                                                                                    GTCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTGATATGGAGTGGTGGAAGCACAGACTA
                                                                                                                                                                                                                                                                                                                     GCCTCCAGGAAAGGGTCTGGAGTGGCTGGCAGTAATATGGGCTGGTGGAAGCACAAATTA
                                                                                                                                                                                                                                                                                                                                                        CATCACCTGCACAGTCTCTGGTTTCTCATTAACTAGCTATGGTGTACACTGGGTTCGCCA
                                                                                                                                                                                                                                                                                                                                                                                                              TTCTCAGGTGAAACTGCAGGAGTCAGGACCTGGCCTAGTGCAGCCCTCACAGAGCCTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                       ATCGCAGGTGCAGGTGAAGGAGTCAGGACCTGGCCTGGTGGCGCCCCTCACAGAGCCTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GACCAAGCTGGAAATAAAAGGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGACCTGGCAGTTTATTTCTGTCAGCAGGATTATAGCT------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTTCACTGGCAGTGGATATGGGACGGATTTCACTTTCACCATCAGCACTGTGCAGGCTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCAATCTCCTAAAGCACTGATTTACTCGGCATCCTACCGGTACAGTGGAGTCCCTGATCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CACCTGCAAGGCCAGTCAGAATGTGGGTACTAATGTAGCCTGGTATCAACAGAAACCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AACCTGCAAGGCCAGTCAGAGTGTGAGTAATGATGTGGCTTGGTACCAACAGAAGCCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TATCCAGCTGACCCAGTCTCAAAAATTCATGTCCACATCAGTAGGAGACAGGGTCAGCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TATTGTGATGACCCAGACTCCCAAATTCCTGCTTGTATCAGCAGGAGACAGGGTTACCAT
                                                                    standard;
                                                                                                                                                              GGGTAACTACGGCTATGCTTTGGACTACTGGGGTCAAGGAACCTCAGTCACCGTCTCCTC
                                                                                                                                                                                                                                              TAATGCAGCTTTCATATCCAGACTGAGCATCAGCAAGGACAATTCCAAGAGCCAAGTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AGACTTGGCAGAGTATTTCTGTCAGCAATATAACAGCTATCCGCTCACGTTCGGTGCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTTCACAGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAATGTGCAGTCTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              67.2%;
nilarity 81.5%;
Conservative
              (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BP; 384 A; 365
                                                                                                                                     AGAACTGGTCGTTTGCTTACTGGGGCCAAGGGACCACGGTCACCGTCTCCTC
                                                                  DNA;
              entry)
                                                                  1479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 480; DB
Pred. No. 1.9e.
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   c;
                                                                  ВP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ଦ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   341 T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 13;
l.9e-129;
les 115;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ď,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 1479;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Other;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -CGCTCGGAGGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                18;
                                                                                                                                                                713
                                                                                                                                                                                                                                                                                                                              533
                                                                                                                                                                                                                                                                                                                                                                                   473
                                                                                                                                                                                                                                                                                                                                                                                                                                       413
                                                                                                                                     713
                                                                                                                                                                                         661
                                                                                                                                                                                                                   653
                                                                                                                                                                                                                                              602
                                                                                                                                                                                                                                                                         593
                                                                                                                                                                                                                                                                                                    542
                                                                                                                                                                                                                                                                                                                                                        482
                                                                                                                                                                                                                                                                                                                                                                                                              422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
```

```
S
                                                                                       밁
                                                                                                                                       밁
                                                                                                                                                              Ş
                                    밁
                                                                                                            Ś
                                                                                                                                                                                          밁
                                                                                                                                                                                                                Ś
                                                                                                                                                                                                                                                                                              Query Match
Best Local S
Matches 587
                                                                                                                                                                                                                                                                                                                             The invention relates to a novel polypeptide construct comprising at least one CDR3 region comprising at least one mutation in a fully defin sequence of 6 amino acids. A construct of the invention has antiinflammatory, antimicrobial, cytostatic, immunomodulator, and immunosuppressive activity. The polypeptide construct, polynucleotide, vector or composition are useful for the prevention, treatment or amelioration of a proliferative disease, a tumorous disease, an inflammatory disease, an immunological disorder, an autoimmune disease an infectious disease in a human subject. The present sequence encodes bispecific single chain antibody scFv EpCAMxCD3 with the M20 mutant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Synthetic.
Unidentified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CDR3; antiinflammatory; antimicrobi
immunosuppressive; proliferative di
immunological disorder; autoimmune
                                                                                                                                                                                                                                                                                           Sequence 1479 BP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                diseases comprises at least one
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          11-OCT-2002; 2002CA-02403313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  11-OCT-2002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CA2403313-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Antibody scfv EpCAMxCD3
                                                                                                                                                                                                                                          Local Sinhes 587;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2004-390792/37.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EpCAMxCD3;
              243
                                                                                       123
                                                                                                               123
                                                                                                                                        63
                                                                                                                                                                 63
                                                                                                                                                                                           ω
                                                                                                                                                                                                                 ω
                                                                                                                                                                                                                                                                                                                     Ħ
                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADS99443
AGACCTGGCAGTTTATTTCTGTCAGCAGGATTATAGCT----
                                                     CTTCACTGGCAGTGGATATGGGACGGATTTCACTTTCACCATCAGCACTGTGCAGGCTGA
                                                                                       GCAATCTCCTAAAGCACTGATTTACTCGGCATCCTACCGGTACAGTGGAGTCCCTGATCG
                                                                                                        GCAGTCTCCGAAACTGCTGATATACTCTGCATCCAATCGCTACACTGGAGTCCCTGATCG
                                                                                                                                         CACCTGCAAGGCCAGTCAGAATGTGGGTACTAATGTAGCCTGGTATCAACAGAAACCAGG
                                                                                                                                                          AACCTGCAAGGCCAGTCAGAGTGTGAGTAATGATGTGGCTTGGTACCAACAGAAGCCAGG
                                                                                                                                                                                           TATCCAGCTGACCCAGTCTCAAAAATTCATGTCCACATCAGTAGGAGACAGGGTCAGCGT
                                                                                                                                                                                                                 TATTGTGATGACCCAGACTCCCAAATTCCTGCTTGTATCAGCAGGAGACAGGGTTACCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            construct,
                                       CTTCACAGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAATGTGCAGTCTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQ ID NO 78; 80pp; English.
                                                                                                                                                                                                                                                                                                                    the anti CD3 region.
                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2002CA-02403313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           region"
/note= "No start codon"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        antibody;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /*tag= a
/product= "scFv EpCAMxCD3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
1. .1479
                                                                                                                                                                                                                                                                                            385 A; 366 C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                useful in treating, at least one mutated
                                                                                                                                                                                                                                                     67.2%;
81.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 antimicrobial; cytostatic; immunomodulator; iferative disease; tumour; inflammatory disease; autoimmune disease; infectious disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     with M20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ds.
                                                                                                                                                                                                                                        Score 480; DB Pred. No. 1.9e-
0; Mismatches
                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                              389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     mutant
                                                                                                                                                                                                                                                      480;
1
                                                                                                                                                                                                                                                                                            ç
                                                                                                                                                                                                                                                                                            339 T; 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CDR3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     'n
                                                                                                                                                                                                                                          DB 13;
L.9e-129;
les 115;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     anti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     M20 mutant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CD3
                                                                                                                                                                                                                                                                                              U; 0 Other;
                                                                                                                                                                                                                                                                  Length 1479;
                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             and
CGCTCGGAGGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             inflammatory
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ä
                                                                                                                                                                                                                                            18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   encoding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       anti
                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                   at
defined
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DNA.
                                                                                         182
               293
                                       242
                                                                242
                                                                                                                  182
                                                                                                                                        122
                                                                                                                                                                  122
                                                                                                                                                                                           62
                                                                                                                                                                                                                                                                                                                                                           õ
                                                                                                                                                                                                                                             ν
```

σ	243	AGACTTGGCAGAGTATTTCTGTCAGCAATATAAACAGCTATCCGCTCACGTTCGGTGCTGG 302
*	294	GACCAAGCTGGAAATAAAAGGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCGG 353
σ	303	GACCAAGCTCGAGATCAAAGGTGGTGGTGGTTCTGGCGGCGGCGGCTCCGGTGGTGGTG
Υ	354	ATCGCAGGTGCAGGTGAAGGAGTCAGGACCTGGCCCTGGTGGCGCCCTCACAGAGCCTGTC 413
σ	363	TTCTCAGGTGAAACTGCAGGAGTCAGGACCTGGCCTAGTGCAGGCCCTCACAGAGCCCTGTC 422
٧	414	CATCACTTGCACTGTCTCTGGGTTTTCATTAACCAATTATGGTGTACACTGGGTTCGCCA 473
σ	423	CATCACCTGCACAGTCTCTGGTTTCTCATTAACTAGCTATGGTGTACACTGGGTTTCGCCA 482
Υ	474	GCCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGCTGGTGGAAGCACAAATTA 533
σ	483	GTCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTGATATGGAGTGGAGGCACAGACTA 542
Υ.	534	TAATTCGGCTCTTATGTCCAGACTGAGCATCAGCAAGGACAACTCCAAGAGCCAAGTTTT 593
σ	543	TAATGCAGCTTTCATATCCAGACTGAGCATCAGCAAGGACAATTCCCAAGAGCCCAAGTTTT 602
Υ.	594	CTTAAAAATGAACAGTCTGCAAACTGATGACACAGCCATGTACTACTGTGCCAGTCGGGG 653
σ	603	CTTTAAAATGAACAGTCTGCAAGCTAATGACACAGCCATATATTACTGTGCCAGAATGG- 661
Υ	654	GGGTAACTACGGCTATGCTTTGGACTACTGGGGTCAAGGAACCTCAGTCACCGTCTCCTC 713
σ	662	AGAACTGGTCGTTTGCTTACTGGGGCCAAGGGACCACGGTCACCGTCTCCTC 713
earch completed:	mple:	earch completed: February 18, 2005, 20:38:23

·		
	·	

```
Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Regult
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Run
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Total number
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OM nucleic - nucleic search, using sw model
               92:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
           414.4
414.4
414.4
400.2
398.2
398.2
398.2
399.2
399.6
393.6
393.6
393.6
393.6
393.6
393.6
297.6
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
297.7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    seq length:
seq length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Issued_Patents_NA:*

1: /cgn2_6/ptodata/1/ina/5A_COMB.seq:*

2: /cgn2_6/ptodata/1/ina/5B_COMB.seq:*

3: /cgn2_6/ptodata/1/ina/6A_COMB.seq:*

4: /cgn2_6/ptodata/1/ina/6B_COMB.seq:*

5: /cgn2_6/ptodata/1/ina/PCTUS_COMB.seq:*

6: /cgn2_6/ptodata/1/ina/backfiles1.seq:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         February 18, 2005, 20:10:40 ; Search time 147.69 Seconds (without alignments) 7910.513 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Match Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1202784 seqs, 818138359 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-10-075-947A-2
714
               1000.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

500.0

5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          agtattgtgatgacccagac.....cctcagtcaccgtctcctca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2000000000
           88
   US-09-142-9748-2
US-09-142-9748-4
US-08-756-416-31
US-08-756-416-31
US-08-756-416-38
US-08-756-416-38
US-08-756-416-38
US-08-860-174A-1
US-09-171-025-23
US-08-197-834-6
US-09-54-765-12
US-09-54-765-12
US-08-483-749A-13
US-08-481-037-49
US-08-913-136-36
US-08-913-136-36
US-08-913-136-36
US-08-913-1318-3
US-08-913-1318-3
US-08-913-1318-6
US-09-135-1218-6
US-09-135-1318-6
US-08-190-199A-66
US-08-190-199A-66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2405568
Sequence 2, Appli Sequence 31, Appli Sequence 30, Appl Sequence 30, Appl Sequence 31, Appli Sequence 1, Appli Sequence 1, Appli Sequence 23, Appli Sequence 23, Appli Sequence 6, Appli Sequence 1, Appli Sequence 3, Appli Sequence 36, Appli Sequence 37, Appli Sequence 37, Appli Sequence 38, Appli Sequence 49, Appli Sequence 38, Appli Sequenc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  714
```

\$	dg VQ	B &	B &	B 8	Que: Best Matc	RESULT US-09- US-09- J Seque J Pates J GENES J APP APP APP APP APP APP J		- - - - - - - - - - - - - - - - - - -
241 GAAGACCTCAGCTTTATTTCTGTCAGCAGTTATAGCTCGCTC	181 CGCTTCACTGGCAGTGGATATGGGACGGATTTCACTTTCACCATCAGCACTGTGCAGGCT	121 GGGCAGTCTCCGAAACTGCTGATATACTCTGCATCCAATCGCTACACTGGAGTCCCTGA	61 ATAACCTGCAACGCCAGTCAGAGTGTGAGTAATGATGTGGCTTGGTACCAACAGAAGCC	1 AGTATIGIGATGACCCAGACTCCCAAATICCTG	ry Match t Local Similarity 100.0%; Score 714; t Local Similarity 100.0%; Pred. No. 1. ches 714; Conservative 0; Mismatches	RESULT 1  US-09-142-974B-2  Sequence 2, Application US/09142974B  Sequence 2, Application US/09142974B  Patent No. 6451995  GENERAL INFORMATION: APPLICANT: Cheung, Nai-Kong V. APPLICANT: Guo, Hong-Fen APPLICANT: Rivlin, Ken APPLICANT: Sadelain, Michel TITLE OF INVENTION: Single Chain FV Construc TITLE OF INVENTION: Antibodies FILE REFERENCE: MSK.P-013-USNP CURRENT FILING DATE: 1998-09-18 PRIOR APPLICATION NUMBER: US/09/142,974B CURRENT FILING DATE: 1997-03-20 PRIOR APPLICATION NUMBER: BCT/US97/04427 PRIOR APPLICATION NUMBER: 60/013,703 PRIOR FILING DATE: 1997-03-20 PRIOR APPLICATION NUMBER: 60/013,703 PRIOR FILING DATE: 1996-03-20 PRIOR APPLICATION NUMBER: COMMISSION NO 2  PRIOR FILING DATE: 1996-03-20  PRIOR APPLICATION NUMBER: 60/013,703 PRIOR FILING DATE: 1997-03-20  PRIOR APPLICATION NUMBER: 60/013,703 PRIOR FILING DATE: 1997-03-20  PRIOR APPLICATION NUMBER: 60/013,703 PRIOR FILING DATE: 1997-03-20  PRIOR FILING DATE: 1997-03-20  PRIOR APPLICATION: 396-8cFV  US-09-142-974B-2	ALIGNMENTS	28 282.8 39.6 304 2 US-08-591-196-32 30 282.8 39.6 304 2 US-08-591-196-32 31 282.8 39.6 304 4 US-09-293-533-32 31 282 39.5 291 2 US-08-752-844-37 32 282 39.5 291 2 US-08-811-037-48 34 282 39.5 291 3 US-08-811-037-48 35 282 39.5 458 2 US-09-293-533-37 36 282 39.5 458 2 US-08-591-196-3 37 282 39.5 458 2 US-08-591-196-3 38 282 39.5 458 2 US-08-591-196-3 39 282 39.5 458 3 US-09-192-838B-3 39 282 39.5 458 4 US-09-293-533-3 40 282 39.5 458 4 US-09-293-533-6 41 281 39.4 721 2 US-08-26-789-15 42 281.6 39.4 721 2 US-08-26-789-15 43 281.6 39.4 721 2 US-08-26-789-15
OOF DAADDADDDDDADADDDTDDDTDDATAT	ACTTTCACCATCAGCACTGTGCAGGCT 240	TCCAATCGCTACACTGGAGTCCCTGAT 180	GATGTGGCTTGGTACCAACAGAAGCCA 120	CTTGTATCAGCAGGAGACAGGGTTACC 60	DB 3; Length 714; 2e-208; 0; Indels 0; Gaps 0;	cts of Anti-Ganglioside GD2		Sequence 32, Appl 32 Sequence 32, Appl 32 Sequence 37, Appl 37 Sequence 37, Appl 37 Sequence 37, Appl 39 Sequence 65, Appl 39 Sequence 65, Appl 39 Sequence 65, Appl 39 Sequence 15, Appl 39 Sequence 17, Appl 39 Sequence 17, Appl 39 Sequence 17, Appl 39 Sequence 17, Appl

S

300

S

밁

Ś 밁

240

240

180 180

```
GENERAL INFORMATION:

APPLICANT: Cheung, Nai-Kong V.

APPLICANT: Larson, Steven M.

APPLICANT: Larson, Steven M.

APPLICANT: Guo, Hong-Fen

APPLICANT: Rivlin, Ken

APPLICANT: Sadelain, Michel

APPLICANT: Sadelain, Michel

APPLICANT: Sadelain, Michel

FILE OF INVENTION: Antibodies

FILE REFERENCE: MSK.P-013-USNP

CURRENT APPLICATION NUMBER: US/09/142,974B

CURRENT FILING DATE: 1998-09-18

CURRENT FILING DATE: 1998-09-18

PRIOR APPLICATION NUMBER: 60/013,703

PRIOR APPLICATION NUMBER: 60/013,703

PRIOR APPLICATION NUMBER: 50/013,703

PRIOR APPLICATION NUMBER: 50/013,703

PRIOR APPLICATION NUMBER: 50/013,703

PRIOR FILING DATE: 1996-03-20

NUMBER OF SEQ ID NOS: 5

SOFTMARE: Patentin Ver. 2.1

SEQ ID NO 4

LENGTH: 1173

TYDE: DNA
                                                                                                                                                                                                                                                                                                                                                             ; OTHER INFORMATION: 3G6-scFv-streptavidin US-09-142-974B-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 2
US-09-142-974B-4
                                                                                                                                                                                                                                               Query Match
Best Local S
Matches 714
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 4, Application Patent No. 6451995
                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: DNA
ORGANISM: Murine
                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURE:
                                                                                                                                                                                                                                                                              Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          301
                                                                                    61
                                                                                                                                 ATAACCTGCAAGGCCAGTCAGAGTGTGAGTAATGATGTGGCTTGGTACCAACAGAAGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TACGGCTATGCTTTTGGACTACTGGGGTCAAGGAACCTCAGTCACCGTCTCCCTCA 714
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GCTCTTATGTCCAGACTGAGCATCAGCAAGGACACTCCAAGAGCCAAGTTTTCTTAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGCTGGTGGAAGCACAAATTATAATTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGCACTGTCTCTGGGTTTTCATTAACCAATTATGGTGTACACTGGGTTCGCCAGCCTCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCTCTTATGTCCAGACTGAGCATCAGCAAGGACAACTCCAAGAGCCAAGTTTTCTTAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGAAAGGGTCTGGAGTGGCTGGAAGTAATATGGGCTGGTGGAAGCACAAATTATAATTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TGCACTGTCTCTGGGTTTTCATTAACCAATTATGGTGTACACTGGGGTTCGCCAGCCTCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTGGAAATAAAAGGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCCGGTGGCGGATCGCAG 360
                            ATAACCTGCAAGGCCAGTCAGAGTGTGAGTAATGATGTGGCTTGGTACCAACAGAAGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TACGGCTATGCTTTGGACTACTGGGGTCAAGGAACCTCAGTCACCGTCTCCTCA 714
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATGAACAGTCTGCAAACTGATGACACAGCCATGTACTACTGTGCCAGTCGGGGGGGTAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GTGCAGGTGAAGGAGTCAGGACCTGGCCTGGTGGCGCCCTCACAGAGCCTGTCCATCACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GTGCAGGTGAAGGAGTCAGGACCTGGCCTGGTGGCGCCCTCACAGAGCCTGTCCATCACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTGGAAATAAAAGGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCGGATCGCAG
                                                                                                                                                                                                                                               100.0%; ilarity 100.0%; Conservative 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US/09142974B
                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                               Score 714; DB 3;
Pred. No. 1.5e-208;
; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     of Anti-Ganglioside GD2
                                                                                                                                                                                                                                                                                               Length 1173;
                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                            ٥,
                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             300
                                                                                 120
                                                                                                                                 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  360
                               120
                                                                                                                                                                                       60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 3
US-08-756-416-31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 31, Application of the patent No. 6699715; GENERAL INFORMATION: Ledbette APPLICANT: Hayden, APPLICANT: Hayden, APPLICANT: Mittler, APPLICANT: Mittler, APPLICANT: Mittler, APPLICANT: Minberg, APPLIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ई
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                      APPLICATION NUMBER: US/0 FILING DATE: 27-NOV-1996 CLASSIFICATION: 536 PRIOR APPLICATION DATA:
                                                                                             OFFMARE: FASTSEQ Version 2.0 SOFFMARE: FASTSEQ VERSION 2.0 CURRENT APPLICATION DATA: US/08/756,416
                                                                                                                                                        COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FASTSEQ Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Mittler, Robert
APPLICANT: Winberg, Gosta
TITLE OF INVENTION: MEDIATE ADHESION BETWEEN CELLS AND USES
TITLE OF INVENTION: THEREOF
NUMBER OF SEQUENCES: 39
                                                                                                                                                                                                                                                                                                                                                                                                                                                          CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                               COUNTRY:
ZIP: 900
                                                                                                                                                                                                                                                                                                                                                  ADDRESSEE: Merchant & Gould
STREET: 11150 Santa Monica,
CITY: Los Angeles
STATE: CA
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   661 TACGGCTATGCTTTGGACTACTGGGGTCAAGGAACCTCAGTCACCGTCTCCTCA 714
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       601 ATGAACAGTCTGCAAACTGATGACACAGCCATGTACTGTGCCAGTCGGGGGGGTAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             361 GTGCAGGTGAAGGAGTCAGGACCTGGCCTGGTGGCGCCCTCACAGAGCCTGTCCATCACCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121
                                                                                                                                                                                                                                                                                               90025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCTCTTATGTCCAGACTGAGCATCAGCAAGGACAACTCCAAGAGCCAAGTTTTCTTAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGCTGGTGGAAGCACAAATTATAATTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGCTGGTGGAAGCACAAATTATAATTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TGCACTGTCTCTGGGTTTTCATTAACCAATTATGGTGTACACTGGGTTCGCCAGCCTCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TGCACTGTCTCTGGGTTTTCATTAACCAATTATGGTGTACACTGGGTTCGCCAGCCTCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GTGCAGGTGAAGGAGTCAGGACCTGGCCTGGTGGCGCCTCACAGAGCCCTGTCCATCACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTGGAAATAAAAGGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCGGATCGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CGCTTCACTGGCAGTGGATATGGGACGGATTTCACTTTCACCATCAGCACTGTGCAGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGGCAGTCTCCGAAACTGCTGATATACTCTGCATCCAATCGCTACACTGGAGTCCCTGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTGGAAATAAAAGGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCGGATCGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Application US/08756416
                                                                                                                                                                                                                                                                                                                           USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Hayden, Martha
Fell, Perry
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ledbetter, Jeffrey
60/007,755
                                                                                                                                                                                                                                                                                                                                                                                                             Suite
                                                                                                                                                                                                                                                                                                                                                                                                             400
```

714

660

600

600 540 540 480 480 420 420 360 360 300 300

á

문

8 В 5 B Ś В 5 밁

밁

Ś 片 δ

밁

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; MOLECULE TYPE: Other US-08-756-416-31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS: 522 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME: Adriano, Sarah B
REGISTRATION NUMBER: 34,470
REFERENCE/DOCKET NUMBER: 300
TELECOMMUNICATION INFORMATION:
TELEPHONE: 310-445-1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE: 30-NOV-1995
ATTORNEY/AGENT INFORMATION:
NAME: Adriano carri
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: nucleic acid
STRANDEDNESS: doub
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEFAX: 310-445-9031
TELEX:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          307
                                                                                                                                                                                                                         547
                                                                                                                                                                                                                                                                                                                                                                        427
                                                                                                                                                                                                                                                                                                                                                                                                             400
                                                                                                                                                                                                                                                                                                                                                                                                                                                367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              569;
727
                                694
                                                                       667
                                                                                                          640
                                                                                                                                                 607
                                                                                                                                                                                    980
                                                                                                                                                                                                                                                            520
                                                                                                                                                                                                                                                                                                487
                                                                                                                                                                                                                                                                                                                                     460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        67 TCCTGCAGAGCCAGTGAAAGTGTTGAATATTATGTCACAAGTTTAATGCAGTGGTACCAA 126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4
                                                                                                                                                                  AAGAGCCAAGTTTTCTTAAAAATGAACAGTCTGCAAACTGATGACACACGCCATGTACTAC
                                                                                                                                                                                                                                              GGAAGCACAAATTATAATTCGGCTCTTATGTCCAGACTGAGCATCAGCAAGGACAACTCC
                                                                                                                                                                                                                                                                                                                    CACTGGGTTCGCCAGCCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGCTGGT
                                                                                                                                                                                                                                                                                                                                                                                                 TCACAGAGCCTGTCCATCACTTGCACTGTCTCTGGGTTTTCATTAACCAATTATGGTGTA 459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TTCGGTGGAGGCACCAAGCTGGAAATCAAACGGGGTGGCGGTGGCTCGGGCGGTGGTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTCGGAGGGGGGACCAAGCTGGAAATAAAA---GGTGGAGGCGGTTCAGGCGGAGGTGGC 339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GTGCAGGCTGAAGACCTGGCAGTTTATTTCTGTCAGC-----AGGATTATAGCTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GTCCCTGATCGCTTCACTGGCAGTGGATATGGGACGGATTTCACTTTCACCATCAGCACT 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CAGAAGCCAGGCAGTCTCCGAAACTGCTGATATACTCTGCATCCAATCGCTACACTGGA 171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCTGCAAGGCCAGTCAGAGTGTGAGTAATGATGTGGCT-----TGGTACCAA 111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATTGTGATGACCCAGACTCCCAAATTCCTGCTTGTTATCAGCAGGAGACAGGGTTACCATA
                                                                                                  TGTGCCAGTCGGGGGGGTAACTAC-----GGCTATGCTTTGGACTACTGGGGTCAAGGA 693
                                                                                                                                                                                                                         GGAAGCACAGACTATAATTCAGCTCTCAAATCCAGACTGAGCATCACCAAGGACAACTCC
                                                                                                                                                                                                                                                                                              AACTGGGTTCGCCAGCCTCCAGGAAAGGGTCTGGAGTGGCTGGGAATGATATGGGGTGAT
                                                                                                                                                                                                                                                                                                                                                                        TCACAGAGCCTGTCCATCACATGCACCGTCTCAGGGTTCTCATTAACCGGCTATGGTGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                TCGGGTGGCGGCATCTCAGGTGCAGCTGAAGGAGTCAGGACCTGGCCTGGTGGCGCCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GTGGAGGAGGATGATATTGCAATGTATTTCTGTCAGCAAAGTAGGAAGGTTCCTTGGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CAGAAACCAGGACAGCCAAACTCCTCATCTCTGCTGCATCCAACGTAGAATCTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATTGTGCTCACCCAATCTCCAGCTTCTTTGGCTGTGTCTCTAGGTCAGAGAGCCACCATC 66
                                  ACCTCAGTCACCGTCTCCTC 713
                                                                       TGTGCCAGAGATGGTTATAGTAACTTTCATTACTATGGTTATGGACTACTGGGGTCAAGGA
                                                                                                                                             AAGAGCCAAGTTTTCTTAAAAATGAACAGTCTGCAAACTGATGACACAGCCAGATACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         58.0%;
76.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    31:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               30436.41US01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 414.4; DB 4;
Pred. No. 8.8e-117;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches 141;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                              546
                                                                                                                                                                                                                                                                                                                                   519
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   186
                                                                       726
                                                                                                                                               999
                                                                                                                                                                                    639
                                                                                                                                                                                                                         606
                                                                                                                                                                                                                                                            579
                                                                                                                                                                                                                                                                                                                                                                        486
                                                                                                                                                                                                                                                                                                                                                                                                                                                426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         246
```

Ś

á 밁 S

문

5

ঠ

S

밁 S 밁 S 밁

S

GTGCAGGCTGAAGACCTGGCAGTTTATTTCTGTCAGC-

-AGGATTATAGCTCG

240 231 60

δ

밁 ঠ 밁 S

밁

밁 Ś 밁 Ş 밁

```
밁
                                    S
                                                                            밁
                                                                                                        ঠ
                                                                                                                                                     В
                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; Sequence 30, Application US/08756416
; Patent No. 6699715
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 4
US-08-756-416-30
                                                                                                                                                                                                                                                                                                                                                                                         US-08-756-416-30
                                                                                                                                                                                                                                                                                                                                                                                                                         INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 1509 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
Matches 569; Conserva
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CLASSIFICATION: 536
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 60/007,755
PILING DATE: 30-NOV-1995
ATTORNEY AGENT INFORMATION:
NAME: Adriano, Sarah B
REGISTRATION NUMBER: 34,470
REFERENCE/DOCKET NUMBER: 30436.4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Hayden, Martha
APPLICANT: Fell, Perry
APPLICANT: Wittler, Robert
APPLICANT: Wittler, Robert
APPLICANT: Winberg, Gosta
TITLE OF INVENTION: MODIFIED SFV MOLECULES WHICH
TITLE OF INVENTION: MEDIATE ADHESION BETWEEN CELLS
TITLE OF INVENTION: THEREOF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/756,416
FILING DATE: 27-NOV-1996
                                                                                                                                                                                                                                                                                                                                                                                                             MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELECOMMUNICATION INFORMATION: TELEPHONE: 310-445-1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM: MEDIUM TYPE: Diskett
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUMBER OF SEQUENCES: 39
CORRESPONDENCE ADDRESS:
ADDRESSEE: Merchant & Gould
STREET: 11150 Santa Monica,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STREET: 11150 Sant
CITY: Los Angeles
STATE: CA
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER: IBM Con
OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEFAX: 310-445-9031
                                                                                                                                                                                                                                                                                                              569; Conservative
  181
                                                                              121
                                                                                                                   112
                                                                                                                                                         61
                                                                                                                                                                                           64 ACCTGCAAGGCCAGTCAGAGTGTGAGTAATGATGTGGCT-----TGGTACCAA 111
                                                                                                                                                                                                                                    _
                                                                                                                                                                                                                                                                        4 ATTGTGATGACCCAGACTCCCAAATTCCTGCTTGTATCAGCAGGAGACAGGGTTACCATA 63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            90025
                                                                                                      CAGAAGCCAGGGCAGTCTCCGAAACTGCTGATATACTCTGCATCCAATCGCTACACTGGA 171
                                                                                                                                                       TCCTGCAGAGCCAGTGAAAGTGTTGAATATTATGTCACAAGTTTAATGCAGTGGTACCAA
  GTCCCTGATCGCTTCACTGGCAGTGGATATGGGACGGATTTCACCTTTCACCATCAGCACT
                                                                          CAGAAACCAGGACAGCCAACCCCAAACTCCTCATCTCTGCTGCATCCAACGTAGAATCTGGG 180
                                                                                                                                                                                                                                    ATTGTGCTCACCCAATCTCCAGCTTCTTTGGCTGTGTCTCTAGGTCAGAGAGCCACCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1509 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FastSEQ Version 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ledbetter, Jeffrey A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               IBM Compatible
                                                                                                                                                                                                                                                                                                                                                                                                             Other
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Diskette
                                                                                                                                                                                                                                                                                                          58.0%; Score 414.4; DB 4; 76.9%; Pred. No. 1.2e-116; tive 0; Mismatches 141;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             30436.41US01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Suite
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       400
                                                                                                                                                                                                                                                                                                                                                 Length
                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     USES
                                                                                                                                                                                                                                                                                                                                                   1509;
                                                                                                                                                                                                                                                                                                            30;
                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                         120
```

Indels Length

Gaps

-TGGTACCAA

60

171

120

180

339

300 282 240 231

420 399 360

693

639 600 579 540 519 480 459

660

1527; 30;

```
APPLICANT: Hayden, ....
APPLICANT: Fell, Perry
APPLICANT: wittler, Robert
APPLICANT: wittler, Robert
APPLICANT: Winberg, Gosta
TITLE OF INVENTION: MODIFIED
TITLE OF INVENTION: MEDIATE
TITLE OF INVENTION: THEREOF
NUMBER OF SEQUENCES: 39
CORRESPONDENCE ADDRESS:
AnnRESSEE: Merchant & Go
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 5
US-08-756-416-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         日
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         닭
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 29, Application Patent No. 6699715
               COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FASTSEQ Version 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/756,416
FILING DATE: 27-NOV-1996
CLASSIFICATION 536
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 60/007,755
FILING DATE: 30-NOV-1995
ATTORNEY/AGENT INFORMATION:
NAME: Adriano, Sarah B
REGISTRATION NUMBER: 34,470
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                    STREET: 11150 Santa Monica, Suite CITY: Los Angeles
                                                                                                                                                                                                                                                                                        COUNTRY:
   REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          640
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          580
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          520
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             721
                                                                                                                                                                                                                                                                       90025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCTCAGTCACCGTCTCCTC 740
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCTCAGTCACCGTCTCCTC 713
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAGAGCCAAGTTTTCTTAAAAATGAACAGTCTGCAAACTGATGACACAGCCATGTACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGAAGCACAAATTATAATTCGGCTCTTATGTCCAGACTGAGCATCAGCAAGGACAACTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CACTGGGTTCGCCAGCCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGCTGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TTCGGTGGAGGCACCAAGCTGGAAATCAAACGGGGTGGCGGTGGCTCGGGCGGTGGTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TGTGCCAGAGATGGTTATAGTAACTTTCATTACTATGTTATGGACTACTGGGGTCAAGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TGTGCCAGTCGGGGGGTAACTAC-----GGCTATGCTTTGGACTACTGGGGTCAAGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAGAGCCAAGTTTTCTTAAAAATGAACAGTCTGCAAACTGATGACACAGCCAGATACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGAAGCACAGACTATAATTCAGCTCTCAAATCCAGACTGAGCATCACCAAGGACAACTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AACTGGGTTCGCCAGCCTCCAGGAAAGGGTCTGGAGTGGCTGGGAATGATATGGGGTGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCACAGAGCCTGTCCATCACATGCACCGTCTCAGGGTTCTCATTAACCGGCTATGGTGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TCACAGAGCCTGTCCATCACTTGCACTGTCTCTGGGTTTTTCATTAACCAATTATGGTGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCGGGTGGCGGGTCTCAGGTGCAGCTGAAGGAGTCAGGACCTGGCCTGGTGGCGCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCTGGCGGTGGCGGATCGCAGGTGCAGGAGTCAGGACCTGGCCTGGTGGCGCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CTCGGAGGGGGACCAAGCTGGAAATAAAA---GGTGGAGGCGGTTCAGGCGGAGGTGGC
                                                                                                                                                                                                                                                                                        . USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ledbetter, Jeffrey
                                                                                                                                                                                                                                                                                                                                                                                                     GOSTA
MODIFIED SFV MOLECULES WHICH
MEDIATE ADHESION BETWEEN CELI
THEREOF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US/08756416
     30436.41US01
                                                                                                                                                                                                                                                                                                                                                                                                                        ADHESION BETWEEN CELLS AND USES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Þ
                                                                                                                                                                                                                                                                                                                                       400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          693
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          639
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         579
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            519
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             420
RESULT 6
5455030-16
;Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                δ
                                                                                                                                                   밁
                                                                                                                                                                             Ş
                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       뭥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         뭐
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         , MOLECULE TYPE: Other US-08-756-416-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 1527 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELECOMMUNICATION INFORMATION:
TELEPHONE: 310-445-1140
TELEFAX: 310-445-9031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELEX:
                                                                                 721
                                                                                                                                                    661
                                                                                                                                                                                    640
                                                                                                                                                                                                                      601
                                                                                                                                                                                                                                                       580
                                                                                                                                                                                                                                                                                      541
                                                                                                                                                                                                                                                                                                                       520
                                                                                                                                                                                                                                                                                                                                                      481
                                                                                                                                                                                                                                                                                                                                                                                      460
                                                                                                                                                                                                                                                                                                                                                                                                                      421
                                                                                                                                                                                                                                                                                                                                                                                                                                                      400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      340
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121 CAGAAACCAGGACAGCCAAACTCCTCATCTCTGCTGCATCCAACGTAGAATCTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         tch 58.0%; al Similarity 76.9%; 569; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61 TCCTGCAGAGCCAGTGAAAGTGTTGAATATTATGTCACAAGTTTAATGCAGTGGTACCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    64 ACCTGCAAGGCCAGTCAGAGTGTGAGTAATGATGTGGCT------
   5455030
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4 ATTGTGATGACCCAGACTCCCAAATTCCTGCTTGTATCAGCAGGAGACAGGGTTACCATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTCGGAGGGGGACCAAGCTGGAAATAAAA---GGTGGAGGCGGTTCAGGCGGAGGTGGC
                                                                                                                     ACCTCAGTCACCGTCTCCTC
                                                                                                                                                                         TGTGCCAGTCGGGGGGGTAACTAC------GGCTATGCTTTGGACTACTGGGGTCAAGGA
                                                                                                                                                                                                                      AAGAGCCAAGTTTTCTTAAAAATGAACAGTCTGCAAACTGATGACACAGCCAGATACTAC
                                                                                                                                                                                                                                        AAGAGCCAAGTTTTCTTAAAAATGAACAGTCTGCAAACTGATGACACACGCCATGTACTAC
                                                                                                                                                                                                                                                                                      GGAAGCACAGACTATAATTCAGCTCTCAAATCCAGACTGAGCATCACCAAGGACAACTCC
                                                                                                                                                                                                                                                                                                         GGAAGCACAAATTATAATTCGGCTCTTATGTCCAGACTGAGCATCAGCAAGGACAACTCC
                                                                                                                                                                                                                                                                                                                                                      AACTGGGTTCGCCAGCCTCCAGGAAAGGGTCTGGAGTGGCTGGGAATGATATGGGGTGAT
                                                                                                                                                                                                                                                                                                                                                                             CACTGGGTTCGCCAGCCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGCTGGT
                                                                                                                                                                                                                                                                                                                                                                                                                     TCACAGAGCCTGTCCATCACATGCACCGTCTCAGGGTTCTCATTAACCGGCTATGGTGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                             TCACAGAGCCTGTCCATCACTTGCACTGTCTCTGGGTTTTCATTAACCAATTATGGTGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TCGGGTGGCGGCGATCTCAGGTGCAGCTGAAGGAGTCAGGACCTGGCCCTGGTGGCGCCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TCTGGCGGTGGCGGATCGCAGGTGCAGGTGAAGGAGTCAGGACCTGGCCTGGTGGCGCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTCGGTGGAGGCACCAAGCTGGAAATCAAACGGGGTGGCGGTGGCTCGGGCGGTGGTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GTGGAGGAGGATGATATTGCAATGTATTTCTGTCAGCAAAGTAGGAAGGTTCCTTGGACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GTGCAGGCTGAAGACCTGGCAGTTTATTTCTGTCAGC------AGGATTATAGCTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GTCCCTGATCGCTTCACTGGCAGTGGATATGGGACGGATTTCACTTTCACCATCAGCACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CAGAAGCCAGGGCAGTCTCCGAAACTGCTGATATACTCTGCATCCAATCGCTACACTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATTGTGCTCACCCAATCTCCAGCTTCTTTGGCTGTGTCTCTAGGTCAGAGAGCCACCATC
                                                                                                                                                    TGTGCCAGAGATGGTTATAGTAACTTTCATTACTATGTTATGGACTACTGGGGTCAAGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 414.4; DB 4;
Pred. No. 1.2e-116;
0; Mismatches 141;
                                                                                                                  713
```

٦)

; SEQ

```
5455030-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    POLYPEPTIDE BINDING MOLECULES NUMBER OF SEQUENCES: 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION DATA:

APPLICATION NUMBER: 512,910

FILING DATE: 25-APR-1990

APPLICATION NUMBER: 299,617

FILING DATE: 19-JAN-1989

APPLICATION NUMBER: 92,110

FILING DATE: 02-SEP-1987

APPLICATION NUMBER: 902,971

APPLICATION NUMBER: 902,971

FILING DATE: 01-SEP-1986

EQ ID NO:16: 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CURRENT APPLICATION DATA:
APPLICATION NUMBER: US
FILING DATE: 1-APR-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: LADNER, ROBERT C.;BIRD, ROBERT E.;HARDMAN, KARL TITLE OF INVENTION: IMMUNOTHERAPHY USING SINGLE CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      548;
     712
                                                                             652
                                                                                                                                                     595
                                                                                                                                                                                           547
                                                                                                                                                                                                                                                                      487
                                                                                                                                                                                                                                                                                                          475
                                                                                                                                                                                                                                                                                                                                                  427
                                                                                                                                                                                                                                                                                                                                                                                    415
                                                                                                                                                                                                                                                                                                                                                                                                                          367
                                                                                                                                                                                                                                                                                                                                                                                                                                                                355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      307
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4 ATTGTGATGACCCAGACTCCCAAATTCCTGCTTGTATCAGCAGGAGACAGGGTTACCATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GAAGACCTGGCAGTTTATTTCTGTCAGCAG-----GATTATAGCTCGCTCGGAGGGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GGGCAGTCTCCGAAACTGCTGATATACTCTGCATCCAATCGCTACACTGGAGTCCCTGAT
   Ç
                                                                                                                                             TTAAAAATGAACAGTCTGCAAACTGATGACACAGCCATGTACTACTGTGCCA---GTCGG
                                                                                                                                                                                                                                                                                            CCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGCTGGTGGAAGCACAAATTAT
                                                                                                                                                                                                                                                                                                                                                                      ATCACTTGCACTGTCTCTGGGTTTTCATTAACCAATTATGGTGTACACTGGGTTCGCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                TCGCAGGTGCAGGTGAAGGAGTCAGGACCTGGCCTTGGTGGCGCCCTCACAGAGCCTGTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCAAGCTGGAAATAAAAGGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCGGA 354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GAAGATGCTGCCACTTATTACTGTCAGCAGTACAGTGGTTACGGACTCACGTTCGGTGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CGCTTCAGTGGCGGTGGGGACCTCTTACTCTCACAATCAGCAGTGTGGAGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CGCTTCACTGGCAGTGGATATGGGACGGATTTTCACTTTTCACCATCAGCACTGTGCAGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGTGCCTCCCCAAACTCTGGGTTTATGGCACATCCAACTTGGCTTCTGGAGTCCCTGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCTGCAAGGCCAGTCAGAGTGTGAGT---AATGATGTGGCTTGGTACCAACAGAAGCCA 120
                                         GAACGAATCTTTTACTATGCTATGGACTATTGGGGTCAAGGAACCTCAGTCACCGTCTCC
                                                               GGGGGTAACTACGGCTATGCTTTGGACTACTGGGGTCAAGGAACCTCAGTCACCGTCTCC
                                                                                                                                                                                                                                   AATTCGGCTCTTATGTCCAGACTGAGCATCAGCAAGGACAACTCCAAGAGCCAAGTTTTC
                                                                                                                                                                                                                                                                                                                                                ATCACTTGCACTGTCTCTGGGTTTTCATTAACCAACTATGGTGTACACTGGGTTCGCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                            CTGGATGTGCAGCTGAAGGAGTCAGGACCTGTCCTGGTGGCGCCCCTCACAGAGCCTGTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CCCACCAAGCTTAAAGAATCTGGTTCTGTTTCTTCTGAACAGCTGGCTCAGTTTCGTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACCTGCAGGGCCAGCTCAAGTGTAAGTTCCAGTTACTTGCACTGGTACCAGCAGAAGTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AATGTGCTCACCCAGTCTCCAGCAATCATGTCTGCATCTCCAGGGGAAAAGGTCACCATG
                                                                                                                 TTAAAAATGAACAGTCTGCAAATTGATGACACAGCCATATACTACTGTGCCAAACGACTG
                                                                                                                                                                                                                                                                    CCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGCTGGTGGAAACACAAATTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
     714
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      57.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US/08/40,440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 408.2; DB 6;
Pred. No. 6.9e-115;
0; Mismatches 163;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  126
                                                                             711
                                                                                                                                                       651
                                                                                                                                                                                                                                   594
                                                                                                                                                                                                                                                                                                          534
                                                                                                                                                                                                                                                                                                                                                                                      474
                                                                                                                                                                                                                                                                                                                                                                                                                            426
                                                                                                                                                                                                                                                                                                                                                                                                                                                                414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               306
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            66
                                         726
                                                                                                                   666
                                                                                                                                                                                             909
                                                                                                                                                                                                                                                                      546
                                                                                                                                                                                                                                                                                                                                                  486
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 7
5455030-16
;Patent No.
                     S
                                                           밁
                                                                                           ð
                                                                                                                                     문
                                                                                                                                                               ð
                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                      문
                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                              ð
                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5455030-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQ ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PATEON. 5455030

PATEON O. 5455030

PATEON O. TADNER, ROBERT C.; BIRD, ROBERT E.; HARDMAN, KARL

TITLE OF INVENTION: IMMUNOTHERAPHY USING SINGLE CHAIN

POLYPEPTIDE BINDING MOLECULES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match 57.2%;
Best Local Similarity 75.8%;
Matches 548; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQUENCES: 24
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/40
FILING DATE: 1-APR-1993
PRIOR APPLICATION NUMBER: 512,910
APPLICATION NUMBER: 512,910
FILING DATE: 25-APR-1999
APPLICATION NUMBER: 299,617
FILING DATE: 19-JAN-1989
APPLICATION NUMBER: 92,110
FILING DATE: 02-SEP-1987
APPLICATION NUMBER: 902,971
FILING DATE: 03-SEP-1987
APPLICATION NUMBER: 902,971
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LENGTH: 729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       187
                       595
                                                           547
                                                                                                                                       487
                                                                                                                                                                         475
                                                                                                                                                                                                               427
                                                                                                                                                                                                                                                     415
                                                                                                                                                                                                                                                                                        367
                                                                                                                                                                                                                                                                                                                                355
                                                                                                                                                                                                                                                                                                                                                                    307
                                                                                                                                                                                                                                                                                                                                                                                                          295
                                                                                                                                                                                                                                                                                                                                                                                                                                                247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4 ATTGTGATGACCCAGACTCCCAAATTCCTGCTTGTATCAGCAGGAGACAGGGTTACCATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GAAGACCTGGCAGTTTATTTCTGTCAGCAG-----GATTATAGCTCGCTCGGAGGGGGG
                                                                                                                                                                                                                                                                                                              TCGCAGGTGCAGGTGAAGGAGTCAGGACCTGGCCTGGTGGCGCCCTCACAGAGCCTGTCC
                                                                                                                                                                                                                                                                                                                                                                                                          ACCAAGCTGGAAATAAAAGGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCGGA 354
                                                                                                                                                                                                                                                                                                                                                                                                                                              GAAGATGCTGCCACTTATTACTGTCAGCAGTACAGTGGTTACGGACTCACGTTCGGTGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CGCTTCAGTGGCGGTGGGGACCTCTTACTCTCACAATCAGCAGTGTGGAGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CGCTTCACTGGCAGTGGATATGGGACGGATTTCACTTTCACCATCAGCACTGTGCAGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGGCAGTCTCCGAAACTGCTGATATACTCTGCATCCCAATCGCTACACTGGAGTCCCTGAT
TTAAAAATGAACAGTCTGCAAACTGATGACACAGCCATGTACTGCTGCCA---GTCGG
                                                                                 AATTCGGCTCTTATGTCCAGACTGAGCATCAGCAAGGACAACTCCAAGAGCCAAGTTTTC
                                                                                                                                                                                                                                     ATCACTTGCACTGTCTCTGGGTTTTCATTAACCAATTATGGTGTACACTGGGTTCGCCAG
                                                                                                                                                                                                                                                                                          CTGGATGTGCAGCTGAAGGAGTCAGGACCTGTCCTGGTGGCGCCCTCACAGAGCCTGTCC
                                                                                                                                                                                                                                                                                                                                                                      CCCACCAAGCTTAAAGAATCTGGTTCTGTTTCTTGTAACAGCTGGCTCAGTTTCGTTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGTGCCTCCCCAAACTCTGGGTTTATGGCACATCCAACTTGGCTTCTGGAGTCCCTGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCTGCAAGGCCAGTCAGAGTGTGAGT----AATGATGTGGCTTGGTACCCAACAGAAGCCA 120
                                                                                                                                       CCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGCTGGTGGAAACACAAATTAT
                                                                                                                                                                       CCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGCTGGTGGAAGCACAAATTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCTGCAGGGCCAGCTCAAGTGTAAGTTCCAGTTACTTGCACTGGTACCAGCAGAAGTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AATGTGCTCACCCAGTCTCCAGCAATCATGTCTGCATCTCCAGGGGAAAAAGGTCACCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-SEP-1986
                                                             \GCTCTCATGTCCAGACTGAGCATCAGCAAAGACAATTCCAAGAGCCAAGTTTTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US/08/40,440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 408.2; DB 6;
Pred. No. 6.9e-115;
0; Mismatches 163;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
```

126

66 63

534

651 909 594 546 474

426

486

414 366 306 294 246 240 186 180

밁 ঠ 밁 र्ठ 밁 δ 밁 S 밁 Ś 밁 δ 무 ર્ 문 δ 밁 5 밁 Ś В S 밁 S

á

δ 밁 Ś 묽

밁

```
RESULT 8
US-08-756-416-38
                                                                                                                                                                                                              ; FEATURE:
US-08-756-416-38
                                                                                                                                   Query Match
Best Local Similarity
Matches 572; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 38, Application US/08756416 Patent No. 6699715
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Mittler, Robert APPLICANT: Winberg, Gosta TITLE OF INVENTION: MODIFIE TITLE OF INVENTION: MEDIATE TITLE OF INVENTION: MEDIATE TITLE OF INVENTION: 39
                                                                                                                                                                                                                                                                                                            INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 824 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FASTSEQ VERSION 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/756,416
FILLING DATE: 27-NOV-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION DATA:
APPLICATION NUMBER: 60/007,755
FILING DATE: 30-NOV-1995
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ZIP: 90025
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskett
                                                                                                                                                                                                                                            MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                   TELECOMMUNICATION INFORMATION: TELEPHONE: 310-445-1140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER OF SEQUENCES: 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                 TOPOLOGY:
                                                                                                                                                                                                                                                                            STRANDEDNESS:
                                                                                                                                                                                                                                                                                              TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                   REGISTRATION NUMBER: 34,470
REFERENCE/DOCKET NUMBER: 30436.41US01
                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME: Adriano, Sarah B
REGISTRATION NUMBER: 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STREET: 11150 San
CITY: Los Angeles
STATE: CA
                                                                                                                                                                                                                                                                                                                                                                                   TELEFAX:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADDRESSEE: Merchant & Gould STREET: 11150 Santa Monica,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 652
       130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             712
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 607
                                     64
                                                                        70
                                                                                                        4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TCA
   TCCTGCAGAGCCAGTGAGAGTGTTGAATATTATGTCACAAGTTTAATGCAGTGGTACCAG 189
                               ACCTGCAAGGCCAGTCAGAGTGTGAGTAATGATGTGGCT-----TGGTACCAA 111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GAACGAATCTTTTACTATGCTATGGACTATTGGGGTCAAGGAACCTCAGTCACCGTCTCC
                                                                       ATTGTGCTCACCCAATCTCCAGCTTCTTTGGCTGTGTCTCTAGGGCAGAGAGCCACCATC 129
                                                                                                       ATTGTGATGACCCAGACTCCCAAATTCCTGCTTGTATCAGCAGGAGACAGGGTTACCATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGGGGTAACTACGGCTATGCTTTGGACTACTGGGGTCAAGGAACCTCAGTCACCGTCTCC 711
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTAAAAATGAACAGTCTGCAAATTGATGACACAGCCATATACTACTGTGCCAAACGACTG
                                                                                                                                                                                                                                                                                                                                                                                   310-445-9031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Hayden,
Fell, Pe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               USA
                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mittler, Robert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ledbetter, Jeffrey
                                                                                                                                                                                                                                               linear
E: Other
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             714
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Diskette
                                                                                                                                                                                                                                                                               double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Perry
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Martha
                                                                                                                                                        56.1%;
76.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MODIFIED SFV MOLECULES WHICH MEDIATE ADHESION BETWEEN CELL THEREOF
                                                                                                                                          0;
                                                                                                                                       Score 400.2; DB 4;
Pred. No. 2.1e-112;
0; Mismatches 138;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADHESION BETWEEN CELLS AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Suite
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 400
                                                                                                                                        Indels
                                                                                                                                                                        Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   USES
                                                                                                                                                                          824;
                                                                                                                                        39;
                                                                                                                                       Gaps
                                                                                                        63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               666
                                                                                                                                                                                                                                                                                                            ; Sequence 1, Application US/08860174A
; Patent No. 5989830
; GENERAL INFORMATION:
APPLICANT: DAVIS, Paul James
; APPLICANT: VAN DER LOGT, Cornelis |
APPLICANT: VERHOEIJGEN, Martine Elii
APPLICANT: WILSON, Steve
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          멼
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                   US-08-860-174A-1
COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC comparible

OPERATING SYSTEM: PC-DOS/MS-DOS I

SOFTWARE: MS WORD, WINDOWS 95, Ver

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/860,1741
                                                                                                                                                                                                                                                          APPLICANT: DAVIS, Paul James
APPLICANT: VAN DER LOGT, COTNELIE
APPLICANT: VERHOEIJEN, Martine E:
APPLICANT: WILSON, Steve
TITLE OF INVENTION: A BIFUNCTIONI
TITLE OF INVENTION: ANTIBODY FRAK
NUMBER OF SEQUENCES: 31
                                                                                                                                                                                                                                            CORRESPONDENCE ADDRESS:
                                                                                                                                                                       ADDRESSEE: PILLSBURY, MADISON
STREET: 1100 New York Avenue,
STREET: 9th Floor, East Tower
CITY: WASHINGTON P.
                                                                                                                     COUNTRY: UNITED STATES
ZIP: 20005-3918
                                                                                                                                                        STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             610
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      790
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      589
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        730
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          670
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            568
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 508 ATATGGGCTGGTGGAAGCACAAATTATAATTCGGCTCTTATGTCCAGACCTGAGCATCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               550
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   490
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    430
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          232 GTGCAGGCTGAAGACCTGGCAGTTTATTTCTGTCAGC-----AGGATTATAGCTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 112 CAGAAGCCAGGGCAGTCTCCGAAACTGCTGATATACTCTGCATCCAATCGCTACACTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGTCAAGGAACCTCAGTCACCGTCTCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCCGTGTATTACTGTGCCAGAGATAAGGGATACTCCTATTACTATTCTATGGACTAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCCATGTACTACTGTGCCAG---TCGGGGGGGGTAACTACGGCTATGCTTTGGACTACTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAGGACAACTCCAAGAGCCAAGTTTTCTTAAAAATGAACAGTCTGCAAACTGATGACACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATATGGGCTGGTGGAGGCACGAATTATAATTCGGCTCTCATGTCCAGAAAGAGCATCAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GACTATGGTGTTCATTGGGTTCGCCAGTCTCCAGGACAGGGACTGGAGTGCCTGGGAGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AATTATGGTGTACACTGGGGTTCGCCAGCCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTGGTGACGCCCTCACAGAGCCTGTCCATCACTTGTACTGTCTCTGGGTTTTCATTAAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTGGTGGCGCCTCACAGAGCCTGTCCATCACTTGCACTGTCTCTGGGTTTTTCATTAACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGCGGTTCAGGCGGCGGTGGATCCCTGGCTCAGGTGCAGCTGAAGGAGTCAGGACCTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGTGGCTCTGGCGGTGGCGGATCG-----CAGGTGCAGGTGAAGGAGTCAGGACCTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TTCGGAGGGGGACCAAGCTGGAAATAAAACGGGCTTCGGGTGGTGGTGGTTCTTGGAGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTCGGAGGGGGACCAAGCTGGAAATAAAA-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GTGGACGAGGATGATGTGCAATGTATTTCTGTCAGCAAAGTAGGAAGGTTCCTTACACG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GTCCCTGATCGCTTCACTGGCAGTGGATATGGGACGGATTTCACCTTTCACCATCAGCACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CAGAAGCCAGGACAGCCACCCAAACTCCTCATCTTTGCTGCATCCAACGTAGAATCTGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAAGACAACTCCAAGGGCCAAGTTTTCTTAAAAATGAAGAGTCTGCAAGCTGATGACACA
                                                                                                                                                                                                                                                                              A BIFUNCTIONAL OR ANTIBODY FRAGMENT
   US/08/860,174A
                                                                                                                                                                                                                                                                                                                               Cornelis Paul Brik
artine Elisa
                                                                                                                                                                                                          N.W.
                                 Ver.
                                                       Sod
                                                                                                                                                                                                                                                                               ANALOGUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      713
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGTGGAGGCGGTTCAGGCGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          684
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   507
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   549
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    447
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          789
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            729
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      387
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               249
```

밁 S В S

```
LOCATION: 380..727
; CTHER INFORMATION: /prous-08-860-174A-1
               Ş
                                               밁
                                                                          S
                                                                                                         밁
                                                                                                                                 S
                                                                                                                                                                  뭐
                                                                                                                                                                                             S
                                                                                                                                                                                                                              문
                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                        ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PILING DATE: June 16, 1997

PRIOR APPLICATION DATA:

APPLICATION NUMBER: EP 9530733:

FILING DATE: October 16, 1995

APPLICATION NUMBER: PCT/EP/96/

FILING DATE: August 14, 1996

INFORMATION FOR SEQ ID NO: 1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE CHARACTERISTICS:
LENGTH: 737 base pairs
TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DESCRIPTION: /
DESCRIPTION: 1
IMMEDIATE SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME/KEY: misc_RNA
LOCATION: 335..379
OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STRANDEDNESS: dou
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME/KEY: mat_peptide LOCATION: 11..334 orther information: /p.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME/KEY: CDS
LOCATION: 11..730
OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CLONE:
                  472
                                               434
                                                                           412
                                                                                                         374
                                                                                                                                       352
                                                                                                                                                                     314
                                                                                                                                                                                                   295
                                                                                                                                                                                                                                254
                                                                                                                                                                                                                                                            244
                                                                                                                                                                                                                                                                                            194
                                                                                                                                                                                                                                                                                                                      184
                                                                                                                                                                                                                                                                                                                                                    134 AAATCTCCTCAGCTCCTGGTCTATTATACAACAACCTTAGCAGATGGTGTGCCATCAAGG 193
                                                                                                                                                                                                                                                                                                                                                                                  124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       544;
                                                                                                                                                                                                                                                                                                                                                                                                                  74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            14
                                                                                                                                                                                                                                                                                                                                                                                                                                              64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4
CAGCCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGCTGGTGGAAGCACAAAT 531
                                                                                                                            GGATCGCAGGTGCAGGTGAAGGAGTCAGGACCTGGCCTGGTGGCGCCCTCACAGAGCCTG
                                                                                                                                                                                                                                                                                                               TTCACTGGCAGTGGATATGGGACGGATTTCACTTTCACCATCAGCACTGTGCAGGCTGAA
                                                                TCCATCACTTGCACTGTCTCTGGGTTTTCATTAACCAATTATGGTGTACACTGGGTTTCGC
                                                                                                                                                                     ACCAAGCTCGAGATCAAACGGGGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGC
                                                                                                                                                                                       ACCAAGCTGGAAATAAAA---GGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGC
                                                                                                                                                                                                                              GATTTTGGGAGTTATTACTGTCAACATTTTTGGAGTACTCCTCGGACGTTCGGTGGAGGG
                                                                                                                                                                                                                                                          GACCTGGCAGTTTATTTCTGTCAGCAGGATT-----ATAGCTCGCTCGGAGGGGGG
                                                                                                                                                                                                                                                                                          TTCAGTGGCAGTGGATCAGGAACACAATATTCTCTCAAGATCAACAGCCTGCAACCTGAA
                                                                                                                                                                                                                                                                                                                                                                                 CAGTCTCCGAAACTGCTGATATACTCTGCATCCAATCGCTACACTGGAGTCCCTGATCGC 183
                                                                                                                                                                                                                                                                                                                                                                                                                ACATGTCGAGCAAGTGGGAATATTCACAATTATTTAGCATGGTATCAGCAGAAACAGGGA 133
                                                                                                                                                                                                                                                                                                                                                                                                                                             ACCTGCAAGGCCAGTCAGAGTGTGAGTAATGATGTGGCTTGGTACCAACAGAAGCCAGGG 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATCGAGCTCACCCAGTCTCCAGCCTCCCTTTCTGCGTCTGTGGGAGAAACTGTCACCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATTGTGATGACCCAGACTCCCAAATTCCTGCTTGTATCAGCAGGAGACAGGGTTACCATA 63
                                                                                                         GGATCGCAGGTGCAGCTGCAGGAGTCAGGACCTGGCCTGGTGGCGCCCCTCACAGAGCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EcoRI-HindIII insert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          other nucleic a
/desc = "cDNA of linker(s)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        double
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   55.8%;
75.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /product= "VHlys"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /product=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /product= "(Gly4Ser)3 linker"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /product= "VLlys-GS-VHlys"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PCT/EP/96/03605
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EP 95307332.7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 398.2; DB 2;
Pred. No. 8e-112;
0; Mismatches 158;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          domains with synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              pUR4124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 737;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                           471
                                                                                                         433
                                                                                                                                      411
                                                                                                                                                                    373
                                                                                                                                                                                                  351
                                                                                                                                                                                                                              313
                                                                                                                                                                                                                                                            294
                                                                                                                                                                                                                                                                                          253
                                                                                                                                                                                                                                                                                                                      243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            73
                                                493
```

```
Ş
                             밁
                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 10
US-09-171-025-23
; Sequence 23, A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE:
INFORMATION FOR SEQ ID NO: 2
SEQUENCE CHARACTERISTICS:
LENGTH: 737 base pairs
TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Patent No. 6239259
GENERAL INFORMATION:
APPLICANT:
TITT:
                                                                                                   Query Match
Best Local (
                                                                                        Matches
                                                                                                                                                                                           FEATURE:
NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                          FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                   IMMEDIATE SOURCE:
CLONE: EcoRI-HindIII insert of pUR4124
                                                                                                                                                                                                                                                                                                                                                                                                                                   MOLECULE TYPE:
DESCRIPTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOFTWARE: Patentin Release #1.0, CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE OF INVENTION:
TITLE OF INVENTION:
NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                    FEATURE:
                                                                                                                                                                                                                                                                                                                               FEATURE:
                                                                                                                                                                                                                                                                                                 NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                              LOCATION: 380..727
OTHER INFORMATION: /product= "VHlys"
                                                                                                                                                                                                                        OTHER INFORMATION:
                                                                                                                                                                                                                                      NAME/KEY: misc_RNA
LOCATION: 335.379
                                                                                                                                                                                                                                                                                                                                             LOCATION: 11..730 OTHER INFORMATION:
                                                                                                                                                                                                                                                                                   OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                          NAME/KEY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               592
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          712
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        674 AGAGAT----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     652
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               725
 64
                             14
                                                                                      Similarity 75.2
44; Conservative
ACCTGCAAGGCCAGTCAGAGTGTGAGTAATGATGTGGCTTGGTACCAACAGAAGCCAGGG 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TCA
                             ATCGAGCTCACCCAGTCTCCAGCCTCCCTTTCTGCGTCTGTGGGAGAAACTGTCACCATC 73
                                                         ATTGTGATGACCCAGACTCCCAAATTCCTGCTTGTATCAGCAGGAGACAGGGTTACCATA 63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    egegetaactacegetatectriegactactegegtcaaggaacctcaetcaccetete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TTCTTAAAAATGAACAGTCTGCACACTGATGACACAGCCAGGTACTACTGTGCCAGAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTCTTAAAAATGAACAGTCTGCAAACTGATGACACAGCCATGTACTACTGTGCCAGTCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TATAATTCGGCTCTTATGTCCAGACTGAGCATCAGCAAGGACAACTCCAAGAGCCAAGTT 591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CAGCCTCCAGGAAAGGGTCTGGAGTGGCTGGGAATGATTTGGGGTGATGGAAACACAGAC
                                                                                                                                                                                                                                                                                                 mat_peptide
                                                                                                                                                                               mat_peptide
380..727
                                                                                                                                                                                                                                                                                                                                                                          SdC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          714
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  linear
                                                                                                                                                                                                                                                                                                                                                                                                                                   other nucleic
/desc = "cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                double
                                                                                                   55.8%;
75.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               protein
27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Multivalent and multispecific antigen-binding
                                                                                                                                                                                                                        /product= "(Gly4Ser)3 linker"
                                                                                                                                                                                                                                                                                  /product=
                                                                                                                                                                                                                                                                                                                                           /product= "VLlys-GS-VHlys"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US/09/171,025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TATAGGCTTGACTACTGGGGCCAAGGGACCACGGTCACCGTCTCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           23:
                                                                                     Score 398.2; DB 3;
Pred. No. 8e-112;
0; Mismatches 158;
                                                                                                                                                                                                                                                                                                                                                                                                                             acid domains with synthetic linker(s)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      #1.25
                                                                                        Indels
                                                                                                                 Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (EPO)
                                                                                      21;
                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    711
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   673
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               651
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            613
```

S

```
RESULT 11
US-08-197-834-6
                                                                                                                                                                                                                                             GENERAL INFORMATION:

APPLICANT: SHIMAMURA, TOSHIRO
APPLICANT: NAKAZAWA, HARUMI
APPLICANT: HAMURO, JUNJI
TITLE OF INVENTION: IMMUNOSUP
NUMBER OF SEQUENCES: 7
                                                                                                                                                                                                                                                                                                                                               Sequence 6, Application Patent No. 5639455
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/197,834
                                                                                                                                                                                                                                 CORRESPONDENCE ADDRESS:
                                                                                                                                STATE: V
                                                                                                                                                              ADDRESSEE: P.C. STREET: 1755 S. CITY: Arlington
                                                                                                                    ZIP:
                                                                                                                                                                                                                ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       352
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     184
                                                                                                                                                                                                                                                                                                                                                                                                                                               725
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             712
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             652
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             592
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            554
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  74
                                                                                                                    22202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAATCTCCTCAGCTCCTGGTCTATTATACAACAACCTTAGCAGATGGTGTGCCATCAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Virginia
Y: U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGGGGTAACTACGGCTATGCTTTGGACTACTGGGGGTCAAGGGAACCTCAGTCACCGTCTCC 711
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CAGCCTCCAGGAAAGGGTCTGGAGTGGCTGGGAATGATTTGGGGTGATGGAAACACAGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CAGCCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGCTGGTGGAAGCACAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TCCATCACTTGCACTGTCTCTGGGTTTTCATTAACCAATTATGGTGTACACTGGGTTCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGATCGCAGGTGCAGGTGAAGGAGTCAGGACCTGGCCTGGTGGCGCCCCTCACAGAGCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCAAGCTCGAGATCAAACGGGGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GATTTTGGGAGTTATTACTGTCAACATTTTTGGAGTACTCCTCGGACGTTCGGTGGAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GACCTGGCAGTTTATTTCTGTCAGCAGGATT----ATAGCTCGCTCGGAGGGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TTCACTGGCAGTGGATATGGGACGGATTTCACTTTCACCATCAGCACTGTGCAGGCTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CAGTCTCCGAAACTGCTGATATACTCTGCATCCAATCGCTACACTGGAGTCCCTGATCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                               TCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AGAGAT --
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TTCTTAAAAATGAACAGTCTGCACACTGATGACACAGCCAGGTACTACTGTGCCAGAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TTCTTAAAAATGAACAGTCTGCAAACTGATGACACAGCCATGTACTGCTACTGTGCCAGTCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TATAATTCAGCTCTCAAATCCAGACTGAGCATCAGCAAGGACAACTCCAAGAGCCAAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TATAATTCGGCTCTTATGTCCAGACTGAGCATCAGCAAGGACAACTCCAAGAGCCAAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TCCATCACATGCACCGTCTCAGGGTTCTCATTAACCGGCTATGGTGTAAACTGGGTTCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCAAGCTGGAAATAAAA---GGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TTCAGTGGCAGTGGATCAGGAACACAATATTCTCTCAAGATCAACAGCCTGCAACCTGAA
                                                                                                                                                                     3: P.C.
1755 S. Jefferson Davis Highway,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             714
                                                                                                                                                                                                               OBLON, SPIVAK, McCLELLAND,
                                                                                                                                                                                                                                                  IMMUNOSUPPRESSANT
                                                                                                                                                                                                                                                                                                                                                                US/08197834
                                                                                                                                                                                                                                                                                                                 TOSHIRO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TATAGGCTTGACTACTGGGGCCAAGGGACCACGGTCACCGTCTCC
                                                                                                                                                                                                               MAIER & NEUSTADT,
                                                                                                                                                                                Suite
                                   #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          531
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             673
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             651
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          553
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        471
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       373
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     253
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     243
                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           片
                          Ś
                                                                 밁
                                                                                              Ś
                                                                                                                                В
                                                                                                                                                         $
                                                                                                                                                                                                В
                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                              맑
                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                              문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-08-197-834-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATTORNEY AGENT INFORMATION:
NAME: Oblon, No. 5639455man F
REGISTRATION NUMBER: 24,618
REFERENCE/DOCKET NUMBER: 10-66
TELECOMMUNICATION INFORMATION:
TELEPAX: (703) 413-3200
TELEFAX: (703) 413-2220
TELEFAX: 248855 OPAT UR
TELEX: 248855 OPAT UR
INFORMATION FOR SEQ ID NO: 66:
SEQUENCE CHARACTERISTICS:
LENGTH: 738 base pairs
TYPE: nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE:
CLASSIFICATION: 514
PRIOR APPLICATION DATA:
APPLICATION UMBER: JP 0
FILING DATE: 17-FEB-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MOLECULE TYPE:
DESCRIPTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME/KEY:
LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STRANDEDNESS: sin
TOPOLOGY: linear
     604
                                 589
                                                                   544
                                                                                                                                   484
                                                                                                                                                                469
                                                                                                                                                                                                   424
                                                                                                                                                                                                                                                                364
                                                                                                                                                                                                                                                                                                355
                                                                                                                                                                                                                                                                                                                                307
                                                                                                                                                                                                                                                                                                                                                                295
                                                                                                                                                                                                                                                                                                                                                                                                247
                                                                                                                                                                                                                                                                                                                                                                                                                              244
                                                                                                                                                                                                                                                                                                                                                                                                                                                              187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         al Similarity
555; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4 ATTGTGATGACCCAGACTCCCAAATTCCTGCTTGTATCAGCAGGAGACAGGGTTACCATA
                          GTTTTCTTAAAAATGAACAGTCTGCAAACTGATGACACAGCCATGTACTACTGTGCCAGT
                                                                   CGCCAGCCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGCTGGTGGAAGCACA
                                                                                                                                                                                                                    ATCACTTGCACTGTCTCTGGGTTTTCATTAACCAATTAT------GGTGTACACTGGGTT
                                                                                                                                                                                                                                                                                                TCGCAGGTGCAGGTGAAGGAGTCAGGACCTGGCCTGGTGGCGCCCCTCACAGAGCCTGTCC
                                                                                                                                                                                                                                                                                                                                                    ACCAAGCTGGAAATAAAAGGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCGGA
                                                                                                                                                                                                                                                                                                                                                                                                GACCTGGCAGTTTATTTCTGTCAGCAGGATTATAGGTCTCCATTCACGTTCGGCTCGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                  GACCTGGCAGTTTATTTCTGTCAGCAGGATTATAG-----CTCGCTCGGAGGGGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                TTCACTGGCAGTGGATATGGGACGGATTTCACTTTCACCATCAGCACTGTGCAGGCTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TTCACTGGCAGTGGATATGGGACGGATTTCACTTTCACCATCAGCACTGTGCAGGCTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CAGTCTCCTAAACTACTGATATACTATGCATCCAATCGCTACACTGGAGTCCCTGATCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CAGTCTCCGAAACTGCTGATATACTCTGCATCCAATCGCTACACTGGAGTCCCTGATCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCTGCAAGGCCAGTCAGAGTGTGAGTACTGATGTAAGTTGGTACCAACAGAAGCCAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ACCTGCAAGGCCAGTCAGAGTGTGAGTAATGATGTGGCTTGGTACCAACAGAAGCCAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATCCTGCTGACACAGTCTCCAAAATTCCTGCTTGTATCAGCAGGAGACAGGGTTACCATA
     GTATTCCTCAAGATCACCAGTGTGGACACTGCAGATACTGCCACATACTTCTGTGCTCGA
                                                                                                                                   CGTCAGCCTTCAGGGAAGGGGTCTGGAGTGGCTGGCACACATTTATTGGGATGATGACAAA
                                                                                                                                                                                                   CTGACT
                                                                                                                                                                                                                                                                 ACGCAGGTCAAACTCGAGGAGTCTGGCCCCTGGGATATTGCAGCCCCTCCCAGACCCTCAGT
                                                                                                                                                                                                                                                                                                                                ACAAAGTTGGAAATAAAA----GTCGACAAATCCTCAGGATCTGGCTCCGAATCCAAAAGC
                                                                                                 AATTATAATTCGGCTCTTATGTCCAGACTGAGCATCAGCAAGGACAACTCCAAGAGCCAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CDS
1..738
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DNA (synthetic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Other nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       single
                                                                                                                                                                                                CTTTCTCTGGGTTTTCACTGAGCACTTCTGGTATGGGTGTGAGCTGGATT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        75.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JP 028173/1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         10-661-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 396.2; DB 1;
Pred. No. 3.3e-111;
0; Mismatches 153;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        'ম
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           738;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             27;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
     663
                                                                      603
                                                                                                                                                                                                   483
                                                                                                                                                                                                                                   468
                                                                                                                                                                                                                                                                   423
                                                                                                                                                                                                                                                                                                   414
                                                                                                                                                                                                                                                                                                                                                                   354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              63
                                      648
                                                                                                     588
                                                                                                                                     543
                                                                                                                                                                   528
                                                                                                                                                                                                                                                                                                                                   363
                                                                                                                                                                                                                                                                                                                                                                                                   30€
                                                                                                                                                                                                                                                                                                                                                                                                                                294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  186
```

á 밁 Ś 밁 Š 밁 S 멁 Š В 5 멍 S 밁 S 밁 á 밁 S 뮹

밁

밁

5

밁 Ś

724 700 664 649

RESULT 12 US-09-742-693-29

```
APPLICANT: HOWELL, Steven
APPLICANT: HITTLE, Julie C.
APPLICANT: VAN DER LOGT, Cornelis P.
APPLICANT: PARRY, Neil J.
ITTLE OF INVENTION: METHOD OF TREATING FABRI
FILLE REFERENCE: C7536 (V)
CURRENT APPLICATION NUMBER: US/09/742,693
CURRENT FILING DATE: 2001-06-15
PRIOR APPLICATION NUMBER: EP99310431.4
PRIOR FILING DATE: 1999-12-22
NUMBER OF SEG ID NOS: 34
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 29
LENGTH: 734
TYPE: DNA
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; OTHER INFORMATION: US-09-742-693-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 29, Applicate Patent No. 6579842 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                              AAATCTCCTCAGCTCCTGGTCTATTATACAACAACCTTAGCAGATGGTGTGCCATCAAGG
CCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGCTGGTGGAAGCACAAATTAT
                                                                                                                                                                                                                                      AAGCTGGAAATAAAA----GGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCGGA 354
                                                                                                                                                                                                                                                                                          GATTTTGGGAGTTATTACTGTCAACATTTTTGGAGTACTCCTCGGACGTTCGGTGGAACC
                                                                                                                                                                                                                                                                                                                      TTCAGTGGCAGTGGATCAGGAACACAATATTCTCTCAAGATCAACAGCCTGCAACCTGAA
                                                                                                                                                                                                                                                                                                                                                                                                  TTCACTGGCAGTGGATATGGGACGGATTTCACCTTTCACCATCAGCACTGTGCAGGCTGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CAGTCTCCGAAACTGCTGATATACTCTGCATCCAATCGCTACACTGGAGTCCCTGATCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATTGTGATGACCCAGACTCCCAAATTCCTGCTTGTATCAGCAGGAGACAGGGTTACCATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GTCACCGTCTCCTCA 714
                                                                                                                                                              TCGCAGGTGCAGGTGAAGGAGTCAGGACCTGGCCTGGTGGCGCCCTCACAGAGCCTGTCC
                                                                                                                                                                                                              AAGCTCGAGATCAAACGGGGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACATGTCGAGCAÁGTGGGAATATTCACAÁTTÁTTTAGCATGGTÁTCÁGCÁGÁÁACAGGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ACCTGCAAGGCCAGTCAGAGTGTGAGTAATGATGTGGCTTGGTACCAACAGAAGCCAGGG 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATCGAGCTCÁCCAGTCTCCAGCCTCCCTTTCTGCGTCTGTGGGAGAAACTGTCACCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GTCACCGTCTCCTCA 738
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AGAAGTCTCTATGGTAATTGGGGGGACTATGCTATGGACTACTGGGGTCAAGGAACCTCA 723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CG------GGGGGTAACTACGGCTATGCTTTGGACTACTGGGGTCAAGGAACCTCA
                                                                                              ATCACTTGCACTGTCTCTGGGTTTTCATTAACCAATTATGGTGTACACTGGGTTCGCCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Application US/09742693
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Description of Artificial Sequence: Primer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                55.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 394.8; DB 4;
Pred. No. 8.8e-111;
0; Mismatches 162;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TREATING FABRICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                          414
                                                                                                                                                                                                                373
                                                                                                                                                                                                                                                                                          313
                                                                                                                                                                                                                                                                                                                                297
                                                                                                                                                                                                                                                                                                                                                                      253
                                                                                                                                                                                                                                                                                                                                                                                                        243
                                                                                                                                                                                                                                                                                                                                                                                                                                                193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      73
                                                            493
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 13
5455030-14
;Patent No.
                              δ
                                                                            밁
                                                                                                            δ
                                                                                                                                                    밁
                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  몽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5455030-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQ ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: LADNER, ROBERT
TITLE OF INVENTION: IMMUN
POLYPEPTIDE BINDING MOLECULES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best Local Similarity Matches 550; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION DATA:
APPLICATION NUMBER: 512,910
FILING DATE: 25-APR-1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQUENCES: 24
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US
FILING DATE: 1-APR-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: 299,617
FILING DATE: 19-JAN-1989
APPLICATION NUMBER: 92,110
FILING DATE: 02-SEP-1987
APPLICATION NUMBER: 902,971
FILING DATE: 01-SEP-1986
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LENGTH: 720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NO:14:
                                      412
                                                                                                                                                                                                                                                                                                              187
                                                                                                                                                                                                                                                                                                                                                                                        127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    595
                                                                                                                                                        307
                                                                                                                                                                                              292
                                                                                                                                                                                                                                    247
                                                                                                                                                                                                                                                                        241
                                                                                                                                                                                                                                                                                                                                                  181
                                                                                                                                                                                                                                                                                                                                                                                                                            121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      674
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              614
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       494 CCTCCAGGAAAGGGTCTGGAGTGGCTGGGAATGATTTGGGGGTGATGGAAACACAGACTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5455030
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4 ATTGTGATGACCCAGACTCCCAAATTCCTGCTTGTATCAGCAGGAGACAGGGTTACCATA
                                                                                                                                                                                            GGGACCAAGCTGGAAATAAAAGGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGC
                                                                                                                                                                                                                                                                GAAGACCTGGCAGTTTATTTCTGTCAGCAGGATTATAG------
                                                                                                                                                                                                                                                                                                                                                                                                                            GGGCAGTCTCCGAAAACTGCTGATATACTCTGCATCCAATCGCTACACTGGAGTCCCTGAT
                          TCCATCACTTGCACTGTCTCTGGGTTTTCATTAACCAATTATGGTGTACACTGGGTTTCGC
                                                                                                                                                                                                                                    GAAGATGCTGCCACTTATTACTGCCAGCAGTACAGTGGTTACCCACTCACGTTCGGTGCT
                                                                                                                                                                                                                                                                                                              CGCTTCAGTGGCGGTGGGGTCTGGGACCTCTTACTCTCACAATCAGCAGTGTGGAGGCT
                                                                                                                                                                                                                                                                                                                                      CGCTTCACTGGCAGTGGGATATGGGACGGATTTTCACTTTTCACCATCAGCACTGTGCAGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCTGCAAGGCCAGTCAGAGTGTGAGT---AATGATGTGGCTTGGTACCAACAGAAGCCA 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TTAAAAATGAACAGTCTGCAAACTGATGACACAGCCATGTACTACTGTGCCAGTCGGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AATTCGGCTCTTATGTCCAGACTGAGCATCAGCAAGGACAACTCCAAGAGCCAAGTTTTC 594
                                                                                                  GGATCGCAGGTGAAGGAGTCAGGACCTGGCCTGGTGGCGCCCTCACAGAGCCTG
                                                                                                                                                                                                                                                                                                                                                                                        GGTGCCTCCCCCAAACTCTGGGTTTATGGCACATCCAACTTCGCTTCTGGAGTCCCTGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCTGCAGGGCCAGCTCAAGTGTAAGTTCCAGTTACTTCCACTCCTACCAGCAGAAGTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GAT----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGTAACTACGGCTATGCTTTGGACTACTGGGGTCAAGGAACCTCAGTCACCGTCTCCTCA
                                                                              TCTAAATCTACTCAGCTGAAGGAGTCAGGACCTGTCCTGGTGGCGCCCTCACAGAGCCTG
                                                                                                                                                          GGGACCAAGCTTGAGCTGGAAGGTAAA-----TCTTCTGGTTCTGGTTCCGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AATGTGCTCACCCAGTCTCCAGCAATCATGTCTGCATCTCCAGGGGAAAAGGTCACCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ROBERT C.; BIRD, ROBERT E.; HARDMAN, IMPUNOTHERAPHY USING SINGLE CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          55.1%;
75.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TATAGGCTTGACTACTGGGGCCAAGGGACCACGGTCACCGTCTCCTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US/08/40,440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 393.6; DB 6;
Pred. No. 2e-110;
0; Mismatches 149;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KARL
                                                                                                                                                                                                                                                                          CTCGCTCGGAGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          27;
                                        471
                                                                                                                  411
                                                                                                                                                                                              351
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          714
                                                                                414
                                                                                                                                                                                                                                    306
                                                                                                                                                                                                                                                                          291
                                                                                                                                                                                                                                                                                                              246
                                                                                                                                                                                                                                                                                                                                                  240
                                                                                                                                                                                                                                                                                                                                                                                          186
                                                                                                                                                                                                                                                                                                                                                                                                                            180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      724
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  673
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    654
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            613
```

S

355 314 298

Ş 밁 8 밁

475 434 415 374 á

밁 á 밁 Ş

254 244

밁

밁 á 밁 ş 밁

134

124

74 64 14 4

184

194

á

Query Match Best Local : Matches

FEATURE:

```
RESULT 14
5455030-14
; Patent No. 5455030
; APPLICANT: LADNER, ROBERT C.; BIRD, ROBERT E.; HARDMAN,
; TITLE OF INVENTION: IMMUNOTHERAPHY USING SINGLE CHAIN
; POLYPEPTIDE BINDING MOLECULES
                                                            밁
                                                                                            S
                                                                                                                             밁
                                                                                                                                                       Ş
                                                                                                                                                                                             밁
                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         멍
 밁
                          S
                                                                                                                                                                                                                                                                                                                                                        5
                                                                                                                                                                                                                                                                                                                                                                                                                                                       5455030-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 맑
                                                                                                                                                                                                                                                                                                                                                                                         Matches 550;
                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION DATA:
APPLICATION NUMBER: 512,910
FILING DATE: 25-APR-1990
APPLICATION NUMBER: 299,617
FILING DATE: 19-JAN-1989
APPLICATION NUMBER: 92,110
FILING DATE: 02-SEP-1987
APPLICATION NUMBER: 902,971
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUMBER OF SEQUENCES: 24
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                        Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LENGTH: 720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: US FILING DATE: 1-APR-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             595
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             592
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         475
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         472
 307
                               292
                                                              247
                                                                                             241
                                                                                                                               187
                                                                                                                                                            181
                                                                                                                                                                                             127
                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             709
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 715
                                                                                                                                                                                                                                                             67
                                                                                                                                                                                                                                                                                         64
                                                                                                                                                                                                                                                                                                                                                         4
                                                                                            GAAGACCTGGCAGTTTATTTCTGTCAGCAGGATTATAG------CTCGCTCGGAGGG 291
                                                                                                                                                                                                                                                                                         ACCTGCAAGGCCAGTCAGAGTGTGAGT----AATGATGTGGCTTGGTACCAACAGAAGCCA
                                                                                                                                                                                                                                                                                                                                                        ATTGTGATGACCCCAGACTCCCAAATTCCTGCTTGTATCAGCAGGAGACAGGGTTACCATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCCTAA 720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTGGAACGAATGTTTTACTATGCTATGGACTATTGGGGTCAAGGAACCTCAGTCACCGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CGGGGGGGTAACTACGGCTATGCTTTTGGACTACTGGGGTCAAGGAACCTCAGTCACCGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TTCTTAAAAATGAACAGTCTGCAAACTGATGACACAGCCATGTACTACTGTGCCA----GT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TATAATTCAGCTCTCATGTCCAGACTGAGCATCAGCAAAGACAATTCCAAGAGCCAAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TATAATTCGGCTCTTATGTCCAGACTGAGCATCAGCAAGGACAACTCCAAGAGCCAAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CAGCCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGCTGGTGGAAACACAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CAGCCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGGCTGGTGGAAGCACAAAT
 GGGACCAAGCTTGAGCTGGAAGGTAAA-----
                     GGGACCAAGCTGGAAATAAAAGGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGC
                                                              GAAGATGCTGCCACTTATTACTGCCAGCAGTACAGTGGTTACCCCACTCACGTTCGGTGCT
                                                                                                                             CGCTTCAGTGGCGGTGGGGACCTCTTACTCTCACAATCAGCAGTGTGGAGGCT
                                                                                                                                                            CGCTTCACTGGCAGTGGATATGGGACGGATTTCACTTTCACCATCAGCACTGTGCAGGCT
                                                                                                                                                                                             GGTGCCTCCCCAAACTCTGGGTTTATGGCACATCCAACTTCGCTTCTGGAGTCCCTGCT
                                                                                                                                                                                                                           GGGCAGTCTCCGAAACTGCTGATATACTCTGCATCCAATCGCTACACTGGAGTCCCTGAT
                                                                                                                                                                                                                                                           ACCTGCAGGGCCAGCTCAAGTGTAAGTTCCAGTTACTTCCACTCCTACCAGCAGAAGTCA
                                                                                                                                                                                                                                                                                                                         AATGTGCTCACCCAGTCTCCAGCAATCATGTCTGCATCTCCAGGGGAAAAGGTCACCATG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TCCTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TTCTTAAAAATGAACAGTCTGCAAAATGATGACACAGCCATATACTACTGTGCCAAACGA
                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             714
                                                                                                                                                                                                                                                                                                                                                                                                     55.1%;
75.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US/08/40,440
                                                                                                                                                                                                                                                                                                                                                                                      Score 393.6; DB 6;
Pred. No. 2e-110;
0; Mismatches 149;
----TCTTCTGGTTCTGGTTCCGAA
                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KARL
                                                                                                                                                                                                                                                                                                                                                                                       27;
                                                                                                                                                                                                                                                                                         120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           654
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           648
                                                            306
                                                                                                                            246
                                                                                                                                                            240
                                                                                                                                                                                             186
                                                                                                                                                                                                                                                           126
                                                                                                                                                                                                                                                                                                                         66
                                                                                                                                                                                                                                                                                                                                                         63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               714
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             708
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         534
                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
             밁
                                      Ş
                                                                             밁
                                                                                                           Ş
                                                                                                                                           문
                                                                                                                                                                                                           문
                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            먉
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
```

```
APPLICANT: Porter, Robert A
APPLICANT: Badley, Robert A
TITLE OF INVENTION: Electroactive Surfaces
FILE REFERENCE: IMIN.P-036
CURRENT APPLICATION NUMBER: US/09/554,765
CURRENT FILING DATE: 2000-05-19
PRIOR APPLICATION NUMBER: PCT/GB98/03495
PRIOR PILING DATE: 1998-11-23
NUMBER OF SEQ ID NOS: 15
SOFTWARE: PatentIn version 3.2
SEQ ID NO 12
LENGTH: 739
                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; FEATURE: ; OTHER INFORMATION: bispecific scFv4155-HCV3 and HCV24 construct US-09-554-765-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 15
US-09-554-765-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 12, Application US/09554765
Patent No. 6551495
                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: DNA ORGANISM: artificial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             595
                                                                                184
                                                                                                                        134 AAATCTCCTCAGCTCCTGGTCTATTATACAACCAACCTTAGCAGATGGTGTGCCATCAAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 715 TCCTAA 720
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       709
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            475
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                352
                                                                                                                                                              124 CAGTCTCCGAAACTGCTGATATACTCTGCATCCAATCGCTACACTGGAGTCCCTGATCGC
                                                                                                                                                                                                                                                                                                                                                                       al Similarity
539; Conserv
                                                                                                                                                                                                          74
                                                                                                                                                                                                                                              64 ACCTGCAAGGCCAGTCAGAGTGTGAGTAATGATGTGGCTTGGTACCAACAGAAGCCAGGG
                                                                                                                                                                                                                                                                                       14
                                                                                                                                                                                                                                                                                                                             4 ATTGTGATGACCCCAGACTCCCAAATTCCTGCTTGTATCAGCAGGAGACAGGGTTACCATA
  TTCACTGGCAGTGGATATGGGACGGATTTCACTTTCACCATCAGCACTGTGCAGGCTGAA
                                                                                                                                                                                                                                                                                       ATCGAGCTCACCCAGTCTCCAGCCTCCCTTTCTGCGTCTGTGGGAGAAACTGTCACCATC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TCCTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTGGAACGAATGTTTTACTATGCTATGGACTATTGGGGTCAAGGAACCTCAGTCACCGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CGGGGGGGTAACTACGGCTATGCTTTGGACTACTGGGGTCAAGGAACCTCAGTCACCGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TTCTTAAAAATGAACAGTCTGCAAAATGATGACACAGCCATATACTACTGTGCCAAACGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TTCTTAAAAATGAACAGTCTGCAAACTGATGACACAGCCATGTACTACTGTGCCA---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TATAATTCAGCTCTCATGTCCAGACTGAGCATCAGCAAAGACAATTCCAAGAGCCAAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TATAATTCGGCTCTTATGTCCAGACTGAGCATCAGCAAGGACAACTCCAAGAGCCAAGTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CAGCCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGCTGGTGGAAACACAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CAGCCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGCTGGTGGAAGCACAAAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TCCATCACTTGCACTGTCTCTGGGGTTTTCATTAACCCAACTATGGTGTACACTGGGTTTCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TCCATCACTTGCACTGTCTCTGGGTTTTCATTAACCAATTATGGTGTACACTGGGTTCGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TCTAAATCTACTCAGCTGAAGGAGTCAGGACCTGTCCTGGTGGCGCCCCTCACAGAGCCTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGATCGCAGGTGAAGGAGGAGTCAGGACCTGGCCTGGTGGCGCCCTCACAGAGCCTG
                                          TTCAGTGGCAGTGGATCAGGAACACAATATTCTCTCAAGATCAACAGCCTGCAACCTGAA
                                                                                                                                                                                                          ACATGTCGAGCAAGTGGGAATATTCACAATTATTTAGCATGGTATCAGCAGAAACAGGGA
                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         714
                                                                                                                                                                                                                                                                                                                                                                                        55.1%;
74.9%;
                                                                                                                                                                                                                                                                                                                                                                       0
                                                                                                                                                                                                                                                                                                                                                                     Score 393.2; DB 4;
Pred. No. 2.7e-110;
0; Mismatches 163;
                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                             Length
                                                                                                                                                                                                                                                                                                                                                                       18;
    -AGGGGGGACC
                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ģ
                                                                                                                            193
                                                                                                                                                                  183
                                                                                                                                                                                                          133
                                                                                                                                                                                                                                                   123
                                                                                                                                                                                                                                                                                         73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         708
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               654
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    531
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  471
    297
                                            253
                                                                                  243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       648
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            534
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            414
```

	leted: February 18, 2005, 23:56:50 151.69 весв	Search completed: Job time : 151.69	
CA 724	GATTATAGGCTTGACTACTGGGGCGAAGGCACCACGGTCACCGTCTCCTCA	Db ' 674	
CA 714	S GGTAACTACGGCTATGCTTTGGACTACTGGGGTCAAGGAACCTCAGTCACCGTCTCCTCA	Qy 655	
GA 673	4 TTAAAAATGAACAGTCTGCACACTGATGACACAGCCAGGTACTACTGTGCCAGAGAGAG	Db 614	
3GG 654 	TTAAAAATGAACAGTCTGCAAACTGATGACACAGCCATGTACTACTGTGCCAGTCGGGGG	Оу 595	
TC 613	4 AATTCAGCTCTCAAATCCAGACTGAGCATCAGCAAGGACAACTCCAAGAGCCAAGTTTTC	Db 554	
TC 594	ARTTCGGCTCTTATGTCCAGACTGAGCATCAGCAAGGACAACTCCAAGAGCCAAGTTTTC	Оу 535	
AT 553	4 CCTCCAGGAAAGGGTCTGGAGTGGCTGGGAATGATTTGGGGTGATGGAAACACACAGACTAT	Db 494	
AT 534	CCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGCTGGTGGAAGCACAAATTAT	Qy 475	
AG 493	ATCACATGCACCGTCTCAGGGTTCTCATTAACCGGCTATGGTGTAAACTGGGTTCGCCAG	Db 434	
AG 474	ATCACTTGCACTGTCTCTGGGTTTTCATTAACCAATTATGGTGTACACTGGGTTCGCCAG	Оу 415	
CC 433	4 TCGCAGGTGCAGCTGCAGGAGTCAGGACCTGGCCTGGTGGCGCCCTCACAGAGCCTGTCC	Db 374	
CC 414	5 TCGCAGGTGCAGGTGAAGGAGTCAGGACCTGGCCTGGTGGCGCCCTCACAGAGCCTGTCC	Qy 355	
GA 373	4 AAGCTCGAGATCAAACGGGGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCGGA	Db 314	
3GA 354	AAGCTGGAAATAAAAGGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGAGGTGGCGGA	Оу 298	
 		Db 254	

•			

Tue Feb 22 13:21:06 2005

```
Title:
Perfect score:
Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OM nucleic -
                                                                                                                                                                                                                                                                                                                                           Published Applications_NA:*

1: /cgn2_6/ptodata/2/pubpna/US07_PUBCOMB.seq:*
2: /cgn2_6/ptodata/2/pubpna/US06_NEW_PUB.seq:*
3: /cgn2_6/ptodata/2/pubpna/US06_NEW_PUB.seq:*
4: /cgn2_6/ptodata/2/pubpna/US08_PUBCOMB.seq:*
5: /cgn2_6/ptodata/2/pubpna/PCTUS_PUBCOMB.seq:*
6: /cgn2_6/ptodata/2/pubpna/PCTUS_PUBCOMB.seq:*
7: /cgn2_6/ptodata/2/pubpna/US08_PUBCOMB.seq:*
7: /cgn2_6/ptodata/2/pubpna/US08_PUBCOMB.seq:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          nudleic search, using sw model
          5384158 seqs, 2955248155 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          February 18, 2005, 22:26:05; Search time 462.528 Seconds (without alignments) 9123.970 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 agtattgtgatgacccagac.....cctcagtcaccgtctcctca 714
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-075-947A-2
714
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GenCore version 5.1.6 Copyright (c) 1993 - 2005 Compugen Ltd.
/cgn2_6/ptodata/2/pubpna/US09A_PUBCOMB.seq:*
/cgn2_6/ptodata/2/pubpna/US09B_PUBCOMB.seq:*
/cgn2_6/ptodata/2/pubpna/US09B_PUBCOMB.seq:*
/cgn2_6/ptodata/2/pubpna/US09N_REW_PUBCOMB.seq:*
/cgn2_6/ptodata/2/pubpna/US10A_PUBCOMB.seq:*
/cgn2_6/ptodata/2/pubpna/US10A_PUBCOMB.seq:*
/cgn2_6/ptodata/2/pubpna/US10B_PUBCOMB.seq:*
/cgn2_6/ptodata/2/pubpna/US10B_PUBCOMB.seq:*
/cgn2_6/ptodata/2/pubpna/US10B_PUBCOMB.seq:*
/cgn2_6/ptodata/2/pubpna/US10B_PUBCOMB.seq:*
/cgn2_6/ptodata/2/pubpna/US10P_PUBCOMB.seq:*
/cgn2_6/ptodata/2/pubpna/US10P_PUBCOMB.seq:*
/cgn2_6/ptodata/2/pubpna/US10P_PUBCOMB.seq:*
/cgn2_6/ptodata/2/pubpna/US10P_PUBCOMB.seq:*
/cgn2_6/ptodata/2/pubpna/US10P_PUBCOMB.seq:*
/cgn2_6/ptodata/2/pubpna/US10P_PUBCOMB.seq:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         10768316
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

S
5
玄
≥
ᇛ
m
Ś

	×
110 98 76 110	Result No.
7114 7114 4480 4480 4880 4880	Score
100.0 100.0 100.0 67.2 67.2 67.2 67.2	Query
714 1173 1479 1479 1479 1479 1479 1479 1479 1479	Query Match Length DB
188 188 188 188 188	DB
US-08-940-544-4 US-10-075-947A-2 US-10-075-947A-4 US-10-682-845-60 US-10-682-845-64 US-10-682-845-66 US-10-682-845-68 US-10-682-845-72 US-10-682-845-72 US-10-682-845-72	ID
Sequence 4, Appli Sequence 2, Appli Sequence 4, Appli Sequence 60, Appl Sequence 62, Appl Sequence 64, Appl Sequence 64, Appl Sequence 66, Appl Sequence 70, Appl Sequence 70, Appl Sequence 72, Appl Sequence 74, Appl	Description

18 US-10-682-845-78 9 18 US-10-682-845-84 9 18 US-10-207-655-26 15 US-10-207-655-27 15 US-10-207-655-33 15 US-10-207-655-33 15 US-10-207-655-33 15 US-10-207-655-33 15 US-10-207-655-35 15 US-10-207-655-35 15 US-10-207-655-35 15 US-10-207-655-35 16 US-10-207-655-35 17 US-10-488-754-3 18 US-10-333-235A-1 19 US-10-428-754-3 10 US-10-428-754-3 11 US-10-428-754-3 11 US-10-428-754-3 12 US-10-428-754-3 13 US-10-428-754-3 14 US-10-428-660-9 15 US-10-428-660-9 16 US-10-428-660-9 17 US-10-428-660-9 18 US-10-428-660-9 18 US-10-428-660-9 18 US-10-428-660-9
7.2 1479 18 US-10-682-845-7.2 1479 18 US-10-207-655-8.3 825 15 US-10-207-655-1.2 1491 18 US-10-207-655-1.2 1491 15 US-10-207-655-1.2 1495 15 US-10-207-555-1.2 1495 15 US-10-10-333-2355-335-335-335-335-335-335-335-33
18 US-10-682-845- 18 US-10-682-845- 18 US-10-682-845- 18 US-10-682-845- 18 US-10-682-845- 18 US-10-682-845- 19 US-10-682-845- 15 US-10-207-655- 16 US-10-207-655- 17 US-10-207-053- 18 US-10-207-033-2354- 18 US-10-333-2354- 19 US-10-333-
US-10-682-845 US-10-682-845 US-10-682-845 US-10-682-845 US-10-682-845 US-10-682-845 US-10-207-655 US-10-208-733-2354 US-10-333-2354 US-10-333-2354 US-10-333-2354 US-10-333-2354 US-10-333-2354 US-10-429-666 US-10-239-666
-10 682 845 -10 682 -845 -10 682 -845 -10 682 -845 -10 682 -845 -10 682 -845 -10 682 -845 -10 682 -845 -10 682 -845 -10 682 -845 -10 682 -845 -10 682 -845 -10 682 -10

## ALIGNMENTS

```
CURRENT APPLICATION NUMBER: US/10/075,947A
CURRENT FILING DATE: 2002-02-13
PRIOR APPLICATION NUMBER: 09/142,974
PRIOR FILING DATE: 1998-09-18
PRIOR APPLICATION NUMBER: PCT/US97/04427
PRIOR FILING DATE: 1997-03-20
PRIOR APPLICATION NUMBER: 60/013,703
PRIOR APPLICATION NUMBER: 60/013,703
PRIOR FILING DATE: 1996-03-20
NUMBER OF SEQ ID NOS: 5
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 2
LENGTH: 714
TYPE: DNA
ORGANISM: Murine
                                                                                                                                                                                                                                                                                                                                                                              RESULT 2
US-10-075-947A-2
Sequence 2, Application US/10075947A
; Dublication No. US20030147808A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  뫄
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:
                                                                                                                                                                                                                                   APPLICANT: Riviin, Ken
APPLICANT: Sadelain, Michel
TITLE OF INVENTION: Single Chain FV
TITLE OF INVENTION: Antibodies
FILE REFERENCE: MSK.P-013-2
                                                                                                                                                                                                                                                                                                                  APPLICANT: Cheung, Nai-Kong v
APPLICANT: Larson, Steven M.
APPLICANT: Guo, Hong-Fen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TACGGCTATGCTTTGGACTACTGGGGTCAAGGAACCTCAGTCACCGTCTCCTCA 714
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCTCTTATGTCCAGACTGAGCATCAGCAAGGACACTCCAAGAGCCAAGTTTTCTTAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TGCACTGTCTCTGGGTTTTCATTAACCAATTATGGTGTACACTGGGTTCGCCAGCCTCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GTGCAGGTGAAGGAGTCAGGACCTGGCCTGGTGGCGCCCTCACAGAGGCCTGTCCATCACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATGAACAGTCTGCAAACTGATGACACAGCCATGTACTACTGTGCCAGTCGGGGGGGTAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGCTGGTGGAAGCACAAATTATAATTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GTGCAGGTGAAGGAGTCAGGACCTGGCCTGGTGGCGCCCTCACAGAGCCTGTCCATCACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTGGAAATAAAAGGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGGTGGCGGATCGCAG 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCTTCACTGGCAGTGGATATGGGACGGATTTCACTTTCACCATCAGCACTGTGCAGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCTCTTATGTCCAGACTGAGCATCAGCAAGGACAACTCCAAGAGCCAAGTTTTCTTAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGAAAGGGTCTGGAGTGGCTGGAGTAATATGGGCTGGTGGAAGCACAAATTATAATTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TGCACTGTCTCTGGGTTTTCATTAACCAATTATGGTGTACACTGGGTTCGCCAGCCTCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTGGAAATAAAAGGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCGGATCGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CGCTTCACTGGCAGTGGATATGGGACGGATTTCACCTTTCACCATCAGCACTGTGCAGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GGGCAGTCTCCGAAACTGCTGATATACTCTGCATCCAATCGCTACACTGGAGTCCCTGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGGCAGTCTCCGAAACTGCTGATATACTCTGCATCCAATCGCTACACTGGAGTCCCCTGAT 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATAACCTGCAAGGCCAGTCAGAGTGTGAGTAATGATGTGGCTTGGTACCAACAGAAGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATAACCTGCAAGGCCAGTCAGAGTGTGAGTAATGATGTGGCTTGGTACCAACAGAAGCCA
                                                                                                                                                                                                                                                                                                    Guo, Hong-Fen
Rivlin, Ken
                                                                                                                                                                                                                                                                    Constructs of
                                                                                                                                                                                                                                                                    Anti-Ganglioside
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 120
```

```
APPLICANT: Cheung, Nai-Kong V.
APPLICANT: Larson, Steven M.
APPLICANT: Guo, Hong-Fen
APPLICANT: Rivlin, Ken
APPLICANT: Rivlin, Ken
APPLICANT: Sadelain, Michel
TITLE OF INVENTION: Single Chain FV Construct
TITLE OF INVENTION: Antibodies
FILE REFERENCE: MSK.P-013-2
CURRENT APPLICATION NUMBER: US/10/075,947A
CURRENT APPLICATION NUMBER: 09/142,974
PRIOR APPLICATION UMBER: 09/142,974
                                                                                                                                                                                                                                        RESULT 3
US-10-075-947A-4
                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                               망
                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; OTHER INFORMATION: 3G6-scFv US-10-075-947A-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        맑
                                                                                                                                                                                          Sequence 4, Application US/10075947A Publication No. US20030147808A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
Matches 714; Conserv
                                                                                                                                                                                                                                                                                                         661
                                                                                                                                                                                                                                                                                                                                                                      601
                                                                                                                                                                                                                                                                                                                                                                                                 601
                                                                                                                                                                                                                                                                                                                                                                                                                                                                541
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        361 GTGCAGGTGAAGGAGTCAGGACCTGGCCTGGTGGCGCCCTCACAGAGCCTGTCCATCACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         13
                                                                                                                                                                                                                                                                                                      TACGGCTATGCTTTGGACTACTGGGGTCAAGGAACCTCAGTCACCGTCTCCTCA
                                                                                                                                                                                                                                                                                                                                                                                                 ATGAACAGTCTGCAAACTGATGACACAGCCATGTACTACTGTGCCAGTCGGGGGGGTAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCTCTTATGTCCAGACTGAGCATCAGCAAGGACAACTCCAAGAGCCAAGTTTTCTTAAAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGCTGGTGGAAGCACAAATTATAATTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGCTGGTGGAAGCACAAATTATAATTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TGCACTGTCTCTGGGTTTTCATTAACCAATTATGGTGTACACTGGGTTCGCCAGCCTCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGCACTGTCTCTGGGTTTTCATTAACCAATTATGGTGTACACTGGGTTCGCCAGCCTCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GTGCAGGTGAAGGAGTCAGGACCTGGCCTGGTGGCGCCTCACAGAGCCCTGTCCATCACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTGGAAATAAAAGGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCGGATCGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTGGAAATAAAAGGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCGGATCGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CGCTTCACTGGCAGTGGATATGGGACGGATTTCACTTTCACCATCAGCACTGTGCAGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGGCAGTCTCCGAAACTGCTGATATACTCTGCATCCAATCGCTACACTGGAGTCCCTGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATAACCTGCAAGGCCAGTCAGAGTGTGAGTAATGATGTGGCTTGGTACCAACAGAAGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATAACCTGCAAGGCCAGTCAGAGTGTGTGTGAGTAATGATGTGGCTTGGTACCAACAGAAGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AGTATTGTGATGACCCAGACTCCCAAATTCCTGCTTGTATCAGCAGGAGACAGGGTTACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGTATTGTGATGACCCAGACTCCCAAATTCCTGCTTGTATCAGCAGGAGACAGGGTTACC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.0%; Score 714; DB 15; ilarity 100.0%; Pred. No. 8.8e-216; Conservative 0; Mismatches 0;
                                                                                                FV Constructs
                                                                                              of Anti-Ganglioside
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                GD2
                                                                                                                                                                                                                                                                                                                                                                                                 660
                                                                                                                                                                                                                                                                                                                                                                                                                                  600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
```

4

12

```
PRIOR APPLICATION NUMBER: PCT/US97/04427
PRIOR FILING DATE: 1997-03-20
PRIOR PILING DATE: 1996-03-20
PRIOR FILING DATE: 1996-03-20
NUMBER OF SEO ID NOS: 5
SOFTWARE: Patentin Ver. 2.1
SEO ID NO 4
IENOTH: 1173
TYPE: DNA 4
ORGANISM: Murine
FEATURE: FEATURE: PATENTINE TO THE PATENT
RESULT 4
US-10-682-845-60
; Sequence 60, Application US/10682845
; Publication No. US20040162411A1
; GENERAL INFORMATION:
; APPLICANT: Lanzavecchia, Antonio
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                 ð
                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                     ঠ
                                                                                                                                                                                                                                                                                                                                                                                                    日
                                                                                                                                                                                                                                                                                                                                                                                                                               ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-10-075-947A-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local S
Matches 714
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mac
Local 5.
714;
                                                                                                                                                                    661
                                                                                                                                                                                                       661
                                                                                                                                                                                                                                                601
                                                                                                                                                                                                                                                                                      601
                                                                                                                                                                                                                                                                                                                           541
                                                                                                                                                                                                                                                                                                                                                                541
                                                                                                                                                                                                                                                                                                                                                                                                        481
                                                                                                                                                                                                                                                                                                                                                                                                                                           481
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                         TACGGCTATGCTTTGGACTACTGGGGTCAAGGAACCTCAGTCACCGTCTCCTCA 714
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TGCACTGTCTCTGGGTTTTCATTAACCAATTATGGTGTACACTGGGTTCGCCAGCCTCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTGGAAATAAAAGGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCGGATCGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGGCAGTCTCCGAAACTGCTGATATACTCTGCATCCAATCGCTACACTGGAGTCCCTGAT
                                                                                                                                                                                                                                                                    ATGAACAGTCTGCAAACTGATGACACAGCCATGTACTGTGCCAGTCGGGGGGGTAAC
                                                                                                                                                                                                                                                                                                                           GCTCTTATGTCCAGACTGAGCATCAGCAAGGACAACTCCAAGAGCCAAGTTTTCTTAAAA
                                                                                                                                                                                                                                                                                                                                                   GCTCTTATGTCCAGACTGAGCATCAGCAAGGACAACTCCAAGAGCCAAGTTTTCCTTAAAA
                                                                                                                                                                                                                                                                                                                                                                                                  GANAGGGTCTGGAGTGGCTGGGAGTAATATGGGCTGGAGGCACAAATTATAATTCG
                                                                                                                                                                                                                                                                                                                                                                                                                               GGAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGCTGGAGGAGCACAAATTATAATTCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GTGCAGGTGAAGGAGTCAGGACCTGGCCTTGGTGGCGCCCTCACAGAGGCCTGTCCATCACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GTGCAGGTGAAGGAGTCAGGACCTGGCCTGGTGGCGCCCTCACAGAGCCTGTCCATCACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGGCAGTCTCCGAAACTGCTGATATACTCTGCATCCAATCGCTACACTGGAGTCCCTGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATAACCTGCAAGGCCAGTCAGAGTGTGAGTAATGATGTGGCTTGGTACCAACAGAAGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATAACCTGCAAGGCCAGTCAGAGTGTGAGTAATGATGTGGCTTGGTACCAACAGAAGCCA
                                                                                                                                                                    TACGGCTATGCTTTGGACTACTGGGGTCAAGGAACCTCAGTCACCGTCTCCTCA
                                                                                                                                                                                                                                                  ATGAACAGTCTGCAAACTGATGACACAGCCATGTACTACTGTGCCAGTCGGGGGGGTAAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTGGAAATAAAAGGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCGGATCGCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%; ilarity 100.0%; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3G6-scFv-streptavidin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 714; DB 15;
Pred. No. 1.1e-215;
); Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1173;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              120
                                                                                                                                                                                                                                                                                                                           600
                                                                                                                                                                                                                                                                                                                                                                  600
                                                                                                                                                                                                                                                                                                                                                                                                      540
                                                                                                                                                                                                                                                                                                                                                                                                                                           540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60
                                                                                                                                                                                                                                                                                      660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60
                                                                                                                                                                                                                                                  660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              멼
            RESULT 5
US-10-682-845-62
                                                                                                                 ð
                                                                                                                                                                밁
                                                                                                                                                                                               S
                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                        δ
                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
```

```
; OTHER INFORMATION: US-10-682-845-60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; SEQ ID NO 60
; LENGTH: 1479
; TYPE: DNA
; ORGANISM: artificial s
GREATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FITLE OF INVENTION: Potent T cell modulating mo.
FILE REFERENCE: G2296 US
CURRENT APPLICATION NUMBER: US/10/682,845
CURRENT FILING DATE: 2003-10-10
PRIOR APPLICATION NUMBER: US 60/419,149
PRIOR FILING DATE: 2002-10-18
PRIOR FILING DATE: 2002-10-11
PRIOR FILING DATE: 2002-10-11
NUMBER OF SEQ ID NOS: 89
SOFTWARE: PatentIn version 3.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local S
Matches 587
                                                                                           594
                                                                                                                         543
                                                                                                                                                        534
                                                                                                                                                                                                                                                                                                                   363
                                                                                                                                                                                                                                                                                                                                                                                  303
                            654
                                                             603
                                                                                                                                                                                          483
                                                                                                                                                                                                                        474
                                                                                                                                                                                                                                                       423
                                                                                                                                                                                                                                                                                   414
                                                                                                                                                                                                                                                                                                                                                  354
                                                                                                                                                                                                                                                                                                                                                                                                                294
                                                                                                                                                                                                                                                                                                                                                                                                                                                243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          587;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                 CATCACTTGCACTGTCTCTGGGTTTTCATTAACCAATTATGGTGTACACTGGGTTCGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTTCACTGGCAGTGGATATGGGACGGATTTCACTTTCACCATCAGCACTGTGCAGGCTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCAGTCTCCGAAACTGCTGATATACTCTGCATCCAATCGCTACACTGGAGTCCCTGATCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CACCTGCAAGGCCAGTCAGAATGTGGGTACTAATGTAGCCTGGTATCAACAGAAACCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AACCTGCAAGGCCAGTCAGAGTGTGAGTAATGATGTGGCTTGGTACCAACAGAAGCCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TATTGTGATGACCCCAGACTCCCAAATTCCTGCTTGTATCAGCAGGAGACAGGGTTACCAT
                  GGGTAACTACGGCTATGCTTTGGACTACTGGGGTCAAGGAACCTCAGTCACCGTCTCCTC
                                                                            CTTAAAAATGAACAGTCTGCAAACTGATGACACAGCCATGTACTACTGTGCCAGTCGGGG
                                                                                                                            TAATGCAGCTTTCATATCCAGACTGAGCATCAGCAAGGACAATTCCAAGAGCCAAGTTTT
                                                                                                                                           TAATTCGGCTCTTATGTCCAGACTGAGCATCAGCAAGGACAACTCCAAGAGCCAAGTTTT
                                                                                                                                                                                          GTCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTGATATGGAGTGGTGGAAGCACAGACTA
                                                                                                                                                                                                          GCCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGCTGGTGGAAGCACAAATTA
                                                                                                                                                                                                                                                       CATCACCTGCACAGTCTCTGGTTTCTCATTAACTAGCTATGGTGTACACTGGGTTCGCCA
                                                                                                                                                                                                                                                                                                                                                                                    GACCAAGCTGGAAATAAAAGGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGACTTGGCAGAGTATTTCTGTCAGCAATATAACAGCTATCCGCTCACGTTCGGTGCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGACCTGGCAGTTTATTTCTGTCAGCAGGATTATAGCT------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTTCACAGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAATGTGCAGTCTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GCAATCTCCTAAAAGCACTGATTTACTCGGCATCCTACCGGTACAGTGGAGTCCCTGATCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TATCCAGCTGACCCAGTCTCAAAATTCATGTCCACATCAGTAGGAGACAGGGTCAGCGT
                                                             CTTTAAAATGAACAGTCTGCAAGCTAATGACACAGCCATATATTACTGTGCCAGAATGG-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      67.2%;
nilarity 81.5%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8CFV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EpCAMxCD3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        <u>.</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 480; DB 18;
Pred. No. 2.1e-141;
0; Mismatches 115;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (modified
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      antiCD3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 1479;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VH-region derived
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -CGCTCGGAGGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        from OKT-3)
                                                                                             653
                                                                                                                                                          593
                                                                                                                                                                                                                        533
                                                                                                                                                                                                                                                         482
                                                                                                                                                                                                                                                                                     473
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          62
713
                             713
                                                             661
                                                                                                                                                                                          542
                                                                                                                                                                                                                                                                                                                     422
                                                                                                                                                                                                                                                                                                                                                    413
                                                                                                                                                                                                                                                                                                                                                                                    362
                                                                                                                                                                                                                                                                                                                                                                                                                  353
                                                                                                                                                                                                                                                                                                                                                                                                                                                   302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  242
                                                                                                                            602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ν
```

```
US-10-682-845-62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: LANZAVECCHIA, Antonio
TITLE OF INVENTION: POTENT T cell modulating
FILE REFERENCE: G2296 US
CURRENT APPLICATION NUMBER: US/10/682,845
CURRENT FILING DATE: 2003-10-10
PRIOR APPLICATION NUMBER: US 60/419,149
PRIOR FILING DATE: 2002-10-18
PRIOR FILING DATE: 2002-10-18
PRIOR APPLICATION NUMBER: CA 2,403,313
PRIOR FILING DATE: 2002-10-11
NUMBER OF SEQ ID NOS: 89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local S
Matches 587
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 62, Application US/10682845 Publication No. US20040162411A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOFTWARE: PatentIn version 3.1 SEQ ID NO 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OTHER INFORMATION: scFv EpCAMxCD3 with M1 mutant in anti-CD3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM: artificial sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LENGTH: 1479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity
nes 587; Conserv
                                                                                                             594
                                                                                                                                                543
                                                                                                                                                                                                                         483
                                                                                                                                                                                                                                                              474
                                                                                                                                                                                                                                                                                                423
                                                                                                                                                                                                                                                                                                                                     414
 662
                                      654
                                                                           603
                                                                                                                                                                                    534
                                                                                                                                                                                                                                                                                                                                                                         363
                                                                                                                                                                                                                                                                                                                                                                                                            354
                                                                                                                                                                                                                                                                                                                                                                                                                                                 303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AACCTGCAAGGCCAGTCAGAGTGTGAGTAATGATGTGGCTTGGTACCAACAGAAGCCAGG 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GACCAAGCTGGAAATAAAAGGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCGG
                       GGGTAACTACGGCTATGGACTTGGACTGGGGTCAAGGAACCTCAGTCACCGTCTCCTC
                                                                                                                                                                           TAATTCGGCTCTTATGTCCAGACTGAGCATCAGCAAGGACAACTCCAAGAGCCAAGTTTT
                                                                                                                                                                                                                     GTCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTGATATGGAGTGGTGGAAGCACAGACTA
                                                                                                                                                                                                                                                                                                                                                                                             ATCGCAGGTGCAGGTGAAGGAGTCAGGACCTGGCCTGGTGGCGCCCTCACAGAGCCTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AGACCTGGCAGTTTATTTCTGTCAGCAGGATTATAGCT------CGCTCGGAGGGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTTCACTGGCAGTGGATATGGGACGGATTTCACTTTCACCATCAGCACTGTGCAGGCTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCAATCTCCTAAAGCACTGATTTACTCGGCATCCTACCGGTACAGTGGAGTCCCTGATCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCAGTCTCCGAAACTGCTGATATACTCTGCATCCAATCGCTACACTGGAGTCCCTGATCG
                                                                         CTTTAAAATGAACAGTCTGCAAGCTAATGACACAGCCATATATTACTGTGCCAGAATGG-
                                                                                            CTTAAAAATGAACAGTCTGCAAACTGATGACACAGCCATGTACTACTGTGCCAGTCGGGG
                                                                                                                                              TAATGCAGCTTTCATATCCAGACTGAGCATCAGCAAGGCAAATTCCAAGAGCCAAGTTTT
                                                                                                                                                                                                                                                        GCCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGCTGGTGGAAGCACAAATTA
                                                                                                                                                                                                                                                                                              CATCACCTGCACAGTCTCTGGTTTCTCATTAACTAGCTATGGTGTACACTGGGTTCGCCA
                                                                                                                                                                                                                                                                                                                                   CATCACTTGCACTGTCTCTGGGTTTTCATTAACCAATTATGGTGTACACTGGGTTCGCCA
                                                                                                                                                                                                                                                                                                                                                                      TTCTCAGGTGAAACTGCAGGAGTCAGGACCTGGCCTAGTGCAGCCCTCACAGAGCCTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGACTTGGCAGAGTATTTCTGTCAGCAATATAACAGCTATCCGCTCACGTTCGGTGCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTTCACAGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAATGTGCAGTCTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TATCCAGCTGACCCAGTCTCAAAAATTCATGTCCACATCAGTAGGAGACAGGGTCAGCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TATTGTGATGACCCCAGACTCCCAAATTCCTGCTTGTATCAGCAGGAGACAGGGTTACCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
AGAACTGGTCGTTTGCTTACTGGGGCCAAGGGACCACGGTCACCGTCTCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             67.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Antonio
nt T cell modulating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0; Mismatches 115;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 480; DB 18;
Pred. No. 2.1e-141;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 1479;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     part
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           . 242
                                                                                                         653
                                                                                                                                                                                   593
                                                                                                                                                                                                                                                                                                                                   473
                                                                                                                                                                                                                                                                                                                                                                                                          413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         182
 713
                                  713
                                                                       661
                                                                                                                                                602
                                                                                                                                                                                                                       542
                                                                                                                                                                                                                                                                                                482
                                                                                                                                                                                                                                                                                                                                                                      422
                                                                                                                                                                                                                                                                                                                                                                                                                                               362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     62
                                                                   닭
                                                                                                       Ś
                                                                                                                                                                         5
                                                                                                                                                                                                                                                      Ś
                                                                                                                                                                                                                                                                                              문
                                                                                                                                                                                                                                                                                                                           ঠ
                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    유
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 6
US-10-682-845-64
                       5
                                                                                                                                              문
                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-10-682-845-64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOFTWARE: PatentIn version 3.1
SEQ ID NO 64
LENGTH: 1479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 64, Application US/10682845 Publication No. US20040162411A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches 587;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 67.2%;
Best Local Similarity 81.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CURRENT APPLICATION NUMBER: US/10/682,845
CURRENT FILING DATE: 2003-10-10
PRIOR APPLICATION NUMBER: US 60/419,149
PRIOR FILING DATE: 2002-10-18
PRIOR APPLICATION NUMBER: CA 2,403,313
PRIOR FILING DATE: 2002-10-11
NUMBER OF SEQ ID NOS: 89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Lanzavecchia, Antonio TITLE OF INVENTION: Potent T cell modulating FILE REFERENCE: G2296 US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: DNA ORGANISM: artificial sequence FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OTHER INFORMATION:
603
                                594
                                                                     543
                                                                                                         534
                                                                                                                                                                                   474
                                                                                                                                                                                                                       423
                                                                                                                                                                                                                                                          414
                                                                                                                                                                                                                                                                                                363
                                                                                                                                                                                                                                                                                                                                 354
                                                                                                                                                                                                                                                                                                                                                                      303
                                                                                                                                                                                                                                                                                                                                                                                                          294
                                                                                                                                                                                                                                                                                                                                                                                                                                               243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3 TATTGTGATGACCCAGACTCCCAAATTCCTGCTTGTATCAGCAGGAGACACGGGTTACCAT
 CTTTAAAATGAACAGTCTGCAAGCTAATGACACAGCCATATATTACTGTGCCAGAATGG-
                       CTTAAAAATGAACAGTCTGCAAACTGATGACACAGCCATGTACTACTGTGCCAGTCGGGG
                                                                       TAATGCAGCTTTCATATCCAGACTGAGCATCAGCAAGGACAATTCCAAGAGCCAAGTTTT
                                                                                              TAATTCGGCTCTTATGTCCAGACTGAGCATCAGCAAGGACAACTCCAAGAGCCAAGTTTT
                                                                                                                                              GTCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTGATATGGAGTGGTGGAAGCACAGACTA
                                                                                                                                                                           GCCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGCTGGTAGAGCACAAATTA
                                                                                                                                                                                                                       CATCACCTGCACAGTCTCTGGTTTCTCATTAACTAGCTATGGTGTACACTGGGTTCGCCA
                                                                                                                                                                                                                                            CATCACTTGCACTGTCTCTGGGTTTTCATTAACCAATTATGGTGTACACTGGGTTCGCCA
                                                                                                                                                                                                                                                                                                TTCTCAGGTGAAACTGCAGGAGTCAGGACCTGGCCTAGTGCAGCCCTCACAGAGCCTGTC
                                                                                                                                                                                                                                                                                                                                 ATCGCAGGTGCAGGTGAAGGAGTCAGGACCTGGCCTGGTGGCGCCCCTCACAGAGCCTGTC
                                                                                                                                                                                                                                                                                                                                                                       GACCAAGCTGGAAATAAAAGGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                               AGACTTGGCAGAGTATTTCTGTCAGCAATATAACAGCTATCCGCTCACGTTCGGTGCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AGACCTGGCAGTTTATTTCTGTCAGCAGGATTATAGCT-----CGCTCGGAGGGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTTCACAGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAATGTGCAGTCTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTTCACTGGCAGTGGATATGGGACGGATTTCACCTTTCACCATCAGCACTGTGCAGGCTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCAATCTCCTAAAGCACTGATTTACTCGGCATCCTACCGGTACAGTGGAGTCCCTGATCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCAGTCTCCGAAACTGCTGATATACTCTGCATCCAATCGCTACACTGGAGTCCCTGATCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CACCTGCAAGGCCAGTCAGAATGTGGGTACTAATGTAGCCTGGTATCAACAGAAACCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AACCTGCAAGGCCAGTCAGAGTGTGAGTAATGATGTGGCTTGGTACCAACAGAAGCCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TATCCAGCTGACCCAGTCTCAAAAATTCATGTCCACATCAGTAGGAGACAGGGTCAGCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           scFv EpCAMxCD3 with M4 mutant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 480; DB 18;
Pred. No. 2.1e-141;
0; Mismatches 115;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           molecules
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             in anti-CD3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 1479;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             part
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                       482
                                                                                                                                                                                                                                                            473
                                                                                                                                                                                                                                                                                                                                 413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  62
                                                                         602
                                                                                                           593
                                                                                                                                                542
                                                                                                                                                                                   533
                                                                                                                                                                                                                                                                                                422
                                                                                                                                                                                                                                                                                                                                                                       362
                                                                                                                                                                                                                                                                                                                                                                                                          353
                                                                                                                                                                                                                                                                                                                                                                                                                                               302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              62
```

N

밁 Ś 밁 S

Ś

밁 á 밁 S В 밁 Ş B δ В Ś 밁 5 밁 á 밁 Ş 밁

δ

i)

S

661

```
CURRENT APPLICATION NUMBER: US/10/682,845
CURRENT FILING DATE: 2003-10-10
PRIOR APPLICATION NUMBER: US 60/419,149
PRIOR FILING DATE: 2002-10-18
PRIOR PRIOR PLICATION NUMBER: CA 2,403,313
PRIOR FILING DATE: 2002-10-11
NUMBER OF SEQ ID NOS: 89
SOPTWARE: PAUCHTIN VERSION 3.1
SEQ ID NO 66
LENGTH: 1479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 7
US-10-682-845-66
US-10-682-845-66
; Sequence 66, Application US/10682845
; Publication No. US20040162411A1
; GENERAL INFORMATION:
                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             á
 밁
                        á
                                                                    밁
                                                                                                   ঠ
                                                                                                                               밁
                                                                                                                                                                                                                                                                                                             ঠ
                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                 र्
                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-682-845-66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Lanzavecchia, Antonio
TITLE OF INVENTION: Potent T cell modulating
FILE REFERENCE: G2296 US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OTHER INFORMATION: SCFV EDCAMXCD3 with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM: artificial sequence FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: DNA
                                                                                                                                                                                                              363
                                                                                                                                                                         414
                                                                                                                                                                                                                                                354
                                                                                                                                                                                                                                                                                   303
                                                                                                                                                                                                                                                                                                                                                                                                                             183
 543
                               534
                                                                      483
                                                                                                     474
                                                                                                                                        423
                                                                                                                                                                                                                                                                                                                      294
                                                                                                                                                                                                                                                                                                                                                         243
                                                                                                                                                                                                                                                                                                                                                                                          243
                                                                                                                                                                                                                                                                                                                                                                                                                                                              183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  587;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            654
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TATTGTGATGACCCAGACTCCCAAATTCCTGCTTGTATCAGCAGGAGACAGGGTTACCAT
                                                                                          GCCTCCAGGAAAGGGTCTGGGAGTGGCTGGGAGTAATATGGGCTGGTGGAAGCACAAATTA
                                                                                                                                                            CATCACTTGCACTGTCTCTGGGTTTTCATTAACCAATTATGGTGTACACTGGGTTCGCCA 473
                                                                                                                                                                                                              TTCTCAGGTGAAACTGCAGGAGTCAGGACCTGGCCTAGTGCAGCCCTCACAGAGCCTGTC
                                                                                                                                                                                                                                   ATCGCAGGTGCAGGTGAAGGAGTCAGGACCTGGCCTGGTGGCGCCCTCACAGAGCCTGTC
                                                                                                                                                                                                                                                                                   GACCAAGCTCGAGATCAAAGGTGGTGGTGGTTCTGGCGGCGGCGGCTCCGGTGGTGG
                                                                                                                                                                                                                                                                                                         GACCAAGCTGGAAATAAAAGGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CACCTGCAAGGCCAGTCAGAATGTGGGTACTAATGTAGCCTGGTATCAACAGAAACCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AACCTGCAAGGCCAGTCAGAGTGTGAGTAATGATGTGGCTTGGTACCAACAGAAGCCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GGGTAACTACGGCTATGCTTTGGACTACTGGGGTCAAGGAACCTCAGTCACCGTCTCCTC
                    TAATTCGGCTCTTATGTCCAGACTGAGCATCAGCAAGGACAACTCCAAGAGCCAAGTTTT
                                                                                                                                          CATCACCTGCACAGTCTCTGGTTTCTCATTAACTAGCTATGGTGTACACTGGGTTTCGCCA
                                                                                                                                                                                                                                                                                                                                                       AGACTTGGCAGAGTATTTCTGTCAGCAATATAACAGCTATCCGCTCACGTTCGGTGCTGG
                                                                                                                                                                                                                                                                                                                                                                                 AGACCTGGCAGTTTATTTCTGTCAGCAGGATTATAGCT------CGCTCGGAGGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                             CTTCACAGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAATGTGCAGTCTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTTCACTGGCAGTGGATATGGGACGGATTTCACTTTCACCATCAGCACTGTGCAGGCTGA 242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCAATCTCCTAAAGCACTGATTTACTCGGCATCCTACCGGTACAGTGGAGTCCCTGATCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GCAGTCTCCGAAACTGCTGATATACTCTGCATCCAATCGCTACACTGGAGTCCCTGATCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TATCCAGCTGACCCAGTCTCAAAAATTCATGTCCACATCAGTAGGAGACAGGGTCAGCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -----AGAACTGGTCGTTTGCTTACTGGGGCCAAGGGACCACGGTCACCGTCTCCTC 713
                                                                      GTCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTATGGAGTGGTGGAAGCACAGACTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   67.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 480; DB 18;
Pred. No. 2.1e-141;
0; Mismatches 115;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         M7 mutant in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           molecules
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 1479;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         anti-CD3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       part
                                                                                                       533
 602
                                   593
                                                                      542
                                                                                                                                        482
                                                                                                                                                                                                              422
                                                                                                                                                                                                                                                413
                                                                                                                                                                                                                                                                                   362
                                                                                                                                                                                                                                                                                                                                                         302
                                                                                                                                                                                                                                                                                                                                                                                                                             242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          713
                                                                                                                                                                                                                                                                                                                      353
                                                                                                                                                                                                                                                                                                                                                                                            293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Lanzavecchia, Antonio
TITLE OF INVENTION: Potent T cell modulating mo.
FILE REFERENCE: G2296 US
CURRENT APPLICATION NUMBER: US/10/682,845
CURRENT APPLICATION NUMBER: US 60/419,149
PRIOR APPLICATION NUMBER: US 60/419,149
PRIOR APPLICATION NUMBER: CA 2,403,313
PRIOR APPLICATION NUMBER: CA 2,403,313
PRIOR FILING DATE: 2002-10-11
NUMBER OF SEQ ID NOS: 89
SOFTWARE: PATENTIN VETBION 3:1
SEQ ID NO 68
LENGTH: 1479
TYPE: DNA
ORGANISM: artificial sequence
FEBIURE: NUMBER: CA 2,403,313
PRIOR FILING AGE: ECONOMICS AND CASE OF TABETURE: DNA
ORGANISM: artificial sequence
                        δ
                                                                    밁
                                                                                                     δ
                                                                                                                                 닭
                                                                                                                                                                δ
                                                                                                                                                                                                              믕
                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                á
                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                                           문
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 8
US-10-682-845-68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-10-682-845-68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 68, Applica Publication No. US20 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OTHER INFORMATION: SCFV EPCAMXCD3 with M9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local
                                                                                                                                        363
                                                                                                                                                                                                                                                                                                                                                         183
 483
                               474
                                                                      423
                                                                                                     414
                                                                                                                                                                           354
                                                                                                                                                                                                              303
                                                                                                                                                                                                                                                294
                                                                                                                                                                                                                                                                                   243
                                                                                                                                                                                                                                                                                                                      243
                                                                                                                                                                                                                                                                                                                                                                                            183
                                                                                                                                                                                                                                                                                                                                                                                                                             123
                                                                                                                                                                                                                                                                                                                                                                                                                                                              123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          587;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     654
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             67.2%;
Similarity 81.5%;
                  GCCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGCTGGAGGCACAAATTA 533
                                                                                                                                                           ATCGCAGGTGCAGGTGAAGGAGTCAGGACCTGGCCTGGTGGCGCCCTCACAGAGCCTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                           GCAATCTCCTAAAGCACTGATTTACTCGGCATCCTACCGGTACAGTGGAGTCCCTGATCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCAGTCTCCGAAACTGCTGATATACTCTGCATCCCATCGCTACACTGGAGTCCCTGATCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TATTGTGATGACCCAGACTCCCAAATTCCTGCTTGTATCAGCAGGAGACAGGGTTACCAT
GTCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTGATATGGAGTGGTGGAAGCACAGACTA
                                                                                        CATCACTTGCACTGTCTCTGGGTTTTCATTAACCAATTATGGTGTACACTGGGTTCGCCA 473
                                                                                                                                        TTCTCAGGTGAAACTGCAGGAGTCAGGACCTGGCCTAGTGCAGGCCCTCACAGAGCCTGTC
                                                                                                                                                                                                                                   GACCAAGCTGGAAATAAAAGGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CACCTGCAAGGCCAGTCAGAATGTGGGTACTAATGTAGCCTGGTATCAACAGAAACCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AACCTGCAAGGCCAGTCAGAGTGTGAGTAATGATGTGGCTTGGTACCAACAGAAGCCAGG
                                                                                                                                                                                                              AGACTTGGCAGAGTATTTCTGTCAGCAATATAACAGCTATCCGCTCACGTTCGGTGCTGG
                                                                                                                                                                                                                                                                                                                                                         CTTCACAGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAATGTGCAGTCTGA
                                                                                                                                                                                                                                                                                                                                                                             CTTCACTGGCAGTGGATATGGGACGGATTTCACTTTCACCATCAGCACTGTGCAGGCTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TATCCAGCTGACCCAGTCTCAAAAATTCATGTCCACATCAGTAGGAGACAGGGTCAGCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GGGTAACTACGGCTATGCATTTGGACTACTGGGGTCAAGGGAACCTCAGTCACCGTCTCCTC 713
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CTTAAAAATGAACAGTCTGCAAACTGATGACACAGCCATGTACTACTGTGCCAGTCGGGG
                                                                                                                                                                                                                                                                                                       AGACCTGGCAGTTTATTTCTGTCAGCAGGATTATAGCT------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CTTTAAAATGAACAGTCTGCAAGCTAATGACACAGCCATATATTACTGTGCCAGAATGG-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Application US/10682845
No. US20040162411A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    - AGAACTGGTCGTTTGCTTACTGGGGCCAAGGGACCACGGTCACCGTCTCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 480; DB 18;
Pred. No. 2.1e-141;
0; Mismatches 115;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   mutant in anti-CD3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       molecules
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 1479;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                      CGCTCGGAGGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   part
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
```

122

62 62

413

362 353 302 293 242 242 182 182 122

422

542

482

5

S

542 593

602 653 661 713

```
APPLICATION NUMBER: CA 2,403,313
PRIOR PILING DATE: 2002-10-18
CURRENT PILING DATE: 2002-10-18
PRIOR APPLICATION NUMBER: US 60/419,149
PRIOR APPLICATION NUMBER: CA 2,403,313
PRIOR APPLICATION NUMBER: CA 2,403,313
PRIOR APPLICATION NUMBER: CB 2,403,313
PRIOR APPLICATION NUMBER: CB 2,403,313
PRIOR APPLICATION NUMBER: CB 2,403,313
PRIOR PILING DATE: 2002-10-11
NUMBER OF SEQ ID NOS: 89
SOFTWARE: PATENTIN VETSION 3.1
SEQ ID NO 70
LENGTH: 1479
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 9
US-10-682-845-70
US-10-682-845-70
REQUESTION NO. US20040162411A1
RESULT 9
RESULT 9
US-10-682-845-70
RESULT 9
US-1
     밁
                                            S
                                                                                                    밁
                                                                                                                                              ð
                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ξ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-682-845-70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches 587;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: DNA
ORGANISM: artificial sequence
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OTHER INFORMATION: SCFV EPCAMxCD3 with M10 mutant in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity
                                                                                                    363
                                                                                                                                                   354
                                                                                                                                                                                                      303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     543
  423
                                                  414
                                                                                                                                                                                                                                                        294
                                                                                                                                                                                                                                                                                                          243
                                                                                                                                                                                                                                                                                                                                                          243
                                                                                                                                                                                                                                                                                                                                                                                                              183
                                                                                                                                                                                                                                                                                                                                                                                                                                                              183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   654
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    534
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AACCTGCAAGGCCAGTCAGAGTGTGAGTAATGATGTGGCTTGGTACCAACAGAAGCCAGG
                             CATCACTTGCACTGTCTCTGGGTTTTCATTAACCAATTATGGTGTACACTGGGTTCGCCA
                                                                                                                              ATCGCAGGTGCAGGTGAAGGAGTCAGGACCTGGCCTGGTGGCGCCCCTCACAGAGCCTGTC
                                                                                                                                                                                                                                   GACCAAGCTGGAAATAAAAGGTGGAGGCGGTTCAGGCGGAGGTGGCTGTGGCGGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCAATCTCCTAAAGCACTGATTTACTCGGCATCCTACCGGTACAGTGGAGTCCCTGATCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCAGTCTCCGAAACTGCTGATATACTCTGCATCCAATCGCTACACTGGAGTCCCTGATCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TATTGTGATGACCCAGACTCCCAAATTCCTGCTTGTATCAGCAGGAGACACAGGGTTACCAT
                                                                                                                                                                                                                                                                                                                                          AGACCTGGCAGTTTATTTCTGTCAGCAGGATTATAGCT------CGCTCGGAGGGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CACCTGCAAGGCCAGTCAGAATGTGGGTACTAATGTAGCCTGGTATCAACAGAAACCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GGGTAACTACGGCTATGCTTTGGACTACTGGGGTCAAGGAACCTCAGTCACCGTCTCCTC
CATCACCTGCACAGTCTCTGGTTTCTCATTAACTAGCTATGGTTACACTGGGTTCGCCA
                                                                                                 TTCTCAGGTGAAACTGCAGGAGTCAGGACCTGGCCTAGTGCAGGCCCTCACAGAGCCTGTC
                                                                                                                                                                                                   AGACTTGGCAGAGTATTTCTGTCAGCAATATAACAGCTATCCGCTCACGTTCGGTGCTGG
                                                                                                                                                                                                                                                                                                                                                                                                            CTTCACAGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAATGTGCAGTCTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTTCACTGGCAGTGGATATGGGACGGATTTCACTTTCACCATCAGCACTGTGCAGGCTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TATCCAGCTGACCCAGTCTCAAAAATTCATGTCCACATCAGTAGGAGACAGGGTCAGCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTTTAAAATGAACAGTCTGCAAGCTAATGACACAGCCATATATTACTGTGCCAGAATGG-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTTAAAAATGAACAGTCTGCAAACTGATGACACAGCCATGTACTACTGTGCCAGTCGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TAATGCAGCTTTCATATCCAGACTGAGCATCAGCAAGGACAATTCCAAGAGCCAAGTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TAATTCGGCTCTTATGTCCAGACTGAGCATCAGCAAGGACCAACTCCCAAGAGCCAAGTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AGAACTGGTCGTTTGCTTACTGGGGCCAAGGGACCACGGTCACCGTCTCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          67.2%;
81.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   °;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 480; DB 18;
Pred. No. 2.1e-141;
0; Mismatches 115;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   molecules
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               anti-CD3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               part
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 713
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 713
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  653
482
                                                  473
                                                                                                 422
                                                                                                                                                   413
                                                                                                                                                                                                      362
                                                                                                                                                                                                                                                                                                       302
                                                                                                                                                                                                                                                                                                                                                          293
                                                                                                                                                                                                                                                                                                                                                                                                         242
                                                                                                                                                                                                                                                                                                                                                                                                                                                           242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
                                                                                            밁
                                                                                                                                            δ
                                                                                                                                                                                                      뭐
                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                 á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; ORGANISM: artificial sequence
; FEATURE:
; OTHER INFORMATION: SCFV EPCAM:
US-10-682-845-72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 10
US-10-682-845-72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  문
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILE REFERENCE: G2296 US
CURRENT APPLICATION NUMBER: US/10/682,845
CURRENT FILING DATE: 2003-10-10
PRIOR APPLICATION NUMBER: US 60/419,149
PRIOR FILING DATE: 2002-10-18
PRIOR APPLICATION NUMBER: CA 2,403,313
PRIOR FILING DATE: 2002-10-11
NUMBER OF SEQ ID NOS: 89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; SEQ ID NO 72
; LENGTH: 1479
; TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 72, Application US/10682845
Publication No. US20040162411A1
GENERAL INFORMATION:
APPLICANT: Lanzavecchia, Antonio
TITLE OF INVENTION: Potent T cell modulating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches 587;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOFTWARE: PatentIn version 3.1
363
                             354 ATCGCAGGTGCAGGTGAAGGAGTCAGGACCTGGCCTGGTGGCGCCCTCACAGAGCCTGTC
                                                                                                 303
                                                                                                                                                   294
                                                                                                                                                                                                                                                     243
                                                                                                                                                                                                                                                                                                       183
                                                                                                                                                                                                                                                                                                                                                       183
                                                                                                                                                                                                                                                                                                                                                                                                         123
                                                                                                                                                                                                                                                                                                                                                                                                                                                           123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           63 CACCTGCAAGGCCAGTCAGAATGTGGGTACTAATGTAGCCTGGTATCAACAGAAACCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        63 AACCTGCAAGGCCAGTCAGAGTGTGAGTAATGATGTGGCTTGGTACCAACAGAAGCCAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            3 TATTGTGATGACCCCAGACTCCCAAATTCCTGCTTGTATCAGCAGGAGACAGGGTTACCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
TTCTCAGGTGAAACTGCAGGAGTCAGGACCTGGCCTAGTGCAGCCCTCACAGAGCCTGTC
                                                                                                 GACCAAGCTGGAAATAAAAGGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCGG
                                                                                                                                                                                                                                     AGACCTGGCAGTTTATTTCTGTCAGCAGGATTATAGCT------
                                                                                                                                                                                                                                                                                                          CTTCACAGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAATGTGCAGTCTGA
                                                                                                                                                                                                                                                                                                                                          CTTCACTGGCAGTGGATATGGGACGGATTTCACTTTCACCATCAGCACTGTGCAGGCTGA
                                                                                                                                                                                                                                                                                                                                                                                                         GCAATCTCCTAAAGCACTGATTTACTCGGCATCCTACCGGTACAGTGGAGTCCCTGATCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCAGTCTCCGAAACTGCTGATATACTCTGCATCCAATCGCTACACTGGAGTCCCTGATCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ----AGAACTGGTCTTTGCTTACTGGGGCCAAGGGACCACGGTCACCGTCTCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGGTAACTACGGCTATGCTTTGGACTACTGGGGTCAAGGAACCTCAGTCACCGTCTCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTTTAAAATGAACAGTCTGCAAGCTAATGACACAGCCATATATTACTGTGCCAGAATGG-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTTAAAAATGAACAGTCTGCAAACTGATGACACAGCCATGTACTACTGTGCCAGTCGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TAATGCAGCTTTCATATCCAGACTGAGCATCAGCAAGGACAATTCCAAGAGCCAAGTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TAATTCGGCTCTTATGTCCAGACTGAGCATCAGCAAGGAACAACTCCAAGAGCCAAGTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GCCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGCTGGTGGAAGCACAAATTA
                                                                                                                                                                                                      AGACTTGGCAGAGTATTTCTGTCAGCAATATAACAGCTATCCGCTCACGTTCGGTGCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TATCCAGCTGACCCAGTCTCAAAAATTCATGTCCACATCAGTAGGAGACAGGGTCAGCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      67.2%;
81.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EpCAMxCD3 with M11 mutant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 480; DB 18;
Pred. No. 2.1e-141;
0; Mismatches 115;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  molecules
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 1479;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             anti-CD3
                                                                                                                                                                                                                                                        CGCTCGGAGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             part
```

353 362 413 242 293 302

422

62 122 122 122 182

```
Sequence 74, Application US/10682845

Publication No. US20040162411A1

GENERAL INFORMATION:
APPLICANT: Lanzavecchia, Antonio
TITLE OF INVENTION: Potent T cell modulating molecules
FILE REFERNCE: G2296 US
CURRENT APPLICATION NUMBER: US/10/682,845

CURRENT FILING DATE: 2003-10-10

PRIOR APPLICATION NUMBER: US 60/419,149

PRIOR APPLICATION NUMBER: CA 2,403,313

PRIOR APPLICATION NUMBER: CA 2,403,313

PRIOR FILING DATE: 2002-10-18

SOFTMARE: PatentIn version 3.1

SOFTMARE: PatentIn version 3.1

SEQ ID NO 74

LENGTH: 1479
                                                                                                                                                           Ş
                                                                                              δ
                                                                                                                                                                                                   밁
                                                                                                                                                                                                                               á
                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 11
US-10-682-845-74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            á
В
                        ঠ
                                                                밁
                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                    용
                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ð
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ; OTHER INFORMATION: scFv EpCAMxCD3 with M13 mutant US-10-682-845-74
                                                                                                                                                                                                                                                                                                                                                                                                    Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: DNA ORGANISM: artificial sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                    Local
                                                                                                                                  183
                                                                                                                                                                  183
                                                                                                                                                                                                   123
303
                                                                                                                                                                                                                                    123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   534
                             294
                                                                  243
                                                                                                 243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  414
                                                                                                                                                                                                                                                                   63
                                                                                                                                                                                                                                                                                                                                                                                                    al Similarity
587; Conser
                                                                                                                                                                                                                                                                                                   63
                                                                                                                                                                                                                                                                                                                                    w
                                                                                                                                                                                                                                                                                                                                                                   w
                                                                                                                                                                                                                    GCAGTCTCCGAAACTGCTGATATACTCTGCATCCAATCGCTACACTGGAGTCCCTGATCG
                                                                                                                                                                                                                                                                   CACCTGCAAGGCCAGTCAGAATGTGGGTACTAATGTAGCCTGGTATCAACAGAAACCAGG
                                                                                     AGACCTGGCAGTTTATTTCTGTCAGCAGGATTATAGCT------CGCTCGGAGGGGG
                                                                                                                                                    CTTCACTGGCAGTGGATATGGGACGGATTTCACCTTTCACCATCAGCACTGTGCAGGCTGA 242
                                                                                                                                                                                                 GCAATCTCCTAAAAGCACTGATTTACTCGGCATCCTACCGGTACAGTGGAGTCCCTGATCG
                                                                                                                                                                                                                                                                                          AACCTGCAAGGCCAGTCAGAGTGTGAGTAATGATGTGGCTTGGTACCAACAGAAGCCAGG
                                                                                                                                                                                                                                                                                                                                  TATCCAGCTGACCCAGTCTCAAAAATTCATGTCCACATCAGTAGGAGACAGGGTCAGCGT
                                                                                                                                                                                                                                                                                                                                                                   TATTGTGATGACCCCAGACTCCCAAATTCCTGCTTGTATCAGCAGGAGACAGGGTTACCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGGTAACTACGGCTATGCTTTGGACTACTGGGGTCAAGGAACCTCAGTCACCGTCTCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CTTAAAAATGAACAGTCTGCAAACTGATGACACAGCCATGTACTACTGTGCCAGTCGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TAATTCGGCTCTTATGTCCAGACTGAGCATCAGCAAGGACAACTCCAAGAGCCAAGTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GTCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTGATATGGAGTGGTGGAAGCACAGACTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGCTGGTGGAAGCACAAATTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CATCACCTGCACAGTCTCTGGTTTCTCATTAACTAGCTATGGTGTACACTGGGTTCGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CATCACTTGCACTGTCTCTGGGTTTTCATTAACCAATTATGGTGTACACTGGGTTCGCCA
                               GACCAAGCTGGAAATAAAAGGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCGG 353
                                                                                                                                 CTTCACAGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAATGTGCAGTCTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TAATGCAGCTTTCATATCCAGACTGAGCATCAGCAAGGACAATTCCAAGAGCCAAGTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTTTAAAATGAACAGTCTGCAAGCTAATGACACAGCCATATATTACTGTGCCAGAATGG-
                                                                                                                                                                                                                                                                                                                                                                                                    67.2%;
llarity 81.5%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                   Score 480; DB 18;
Pred. No. 2.1e-141;
0; Mismatches 115;
                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 1479;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ħ
                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     anti-CD3
                                                                                                                                                                                                                                                                                                                                                                                                    18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     part
                                                                                               293
                                                                                                                                  242
                                                                                                                                                                                                                                  182
                                                                                                                                                                                                                                                                   122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 593
                                                                  302
                                                                                                                                                                                                   182
                                                                                                                                                                                                                                                                                                    122
                                                                                                                                                                                                                                                                                                                                    62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               713
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            713
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                653
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 76, Application US/10682845
Publication No. US20040162411A1
GENERAL INFORMATION:
APPLICANT: Lanzavecchia, Antonio
TITLE OF INVENTION: Potent T cell modulating mo
FILE REFERENCE: G2296 US
CURRENT APPLICATION UNMBER: US/10/682,845
CURRENT FILING DATE: 2003-10-10
PRIOR APPLICATION NUMBER: US 60/419,149
PRIOR APPLICATION NUMBER: CA 2,403,313
PRIOR FILING DATE: 2002-10-11
PRIOR FILING DATE: 2002-10-11
                    S
                                                              문
                                                                                               S
                                                                                                                                 밁
                                                                                                                                                              S
                                                                                                                                                                                                 밁
                                                                                                                                                                                                                               á
                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                                                                                                                                    ; OTHER INFORMATION: scFv EpCAMxCD3 with M14 mutant US-10-682-845-76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 12
US-10-682-845-76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQ ID NOS: 89
SOFTWARE: PatentIn version 3.1
SEQ ID NO 76
                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                  LENGTH: 1479
TYPE: DNA
ORGANISM: artificial 6
FEATURE:
                                                                                                                                                                                                                                                                                                                                                     Local
                                                                  183
                                                                                                                                  123
                                                                                                                                                                  123
243
                             243
                                                                                               183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                534
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            654
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       354 ATCGCAGGTGCAGGTGAAGGAGTCAGGACCTGGCCCTGGTGGCGCCCCTCACAGAGCCTGTC
                                                                                                                                                                                                   63
                                                                                                                                                                                                                                  63
                                                                                                                                                                                                                                                                                                                                  cch 67.2%; al Similarity 81.5%; 587; Conservative
                                                                                                                                                                                                                                                                  w
                    AGACCTGGCAGTTTATTTCTGTCAGCAGGATTATAGCT-----
                                                                                 CTTCACTGGCAGTGGATATGGGACGGATTTCACTTTCACCATCAGCACTGTGCAGGCTGA
                                                                                                                                                    GCAGTCTCCGAAACTGCTGATATACTCTGCATCCAATCGCTACACTGGAGTCCCTGATCG
                                                                                                                                                                                                                      AACCTGCAAGGCCAGTCAGAGTGTGAGTAATGATGTGGCTTGGTACCAACAGAAGCCAGG
                                                                                                                                                                                                                                                                                             TATTGTGATGACCCAGACTCCCAAATTCCTGCTTGTATCAGCAGGAGACAGGGTTACCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCCTCCAGGAAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGCTGGTGGAAGCACAAATTA
                                                                                                                                 GCAATCTCCTAAAGCACTGATTTACTCGGCATCCTACCGGTACAGTGGAGTCCCTGATCG
                                                                                                                                                                                                   CACCTGCAAGGCCAGTCAGAATGTGGGTACTAATGTAGCCTGGTATCAACAGAAAACCAGG
                                                                                                                                                                                                                                                                  TATCCAGCTGACCCAGTCTCAAAAATTCATGTCCACATCAGTAGGAGACAGGGTCAGCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGGTAACTACGGCTATGCTTTGGACTACTGGGGTCAAGGAACCTCAGTCACCGTCTCCTC 713
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CATCACCTGCACAGTCTCTGGTTTCTCATTAACTAGCTATGGTGTACACTGGGTTCGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TTCTCAGGTGAAACTGCAGGAGTCAGGACCTGGCCTAGTGCAGCCCTCACAGAGCCTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CTTAAAAATGAACAGTCTGCAAACTGATGACACAGCCATGTACTACTGTGCCAGTCGGGG 653
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TAATTCGGCTCTTATGTCCAGACTGAGCATCAGCAAGGACAACTCCAAGAGCCAAGTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CATCACTTGCACTGTCTCTGGGTTTTTCATTAACCAATTATGGTGTACACTGGGTTCGCCA 473
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GTCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTGATATGGAGTGGTGGAAGCACAGACTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -CTTTAAAATGAACAGTCTGCAAGCTAATGACACAGCCATATATTACTGTGCCAGAATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TAATGCAGCTTTCATATCCAGACTGAGCATCAGCAAGGACAATTCCAAGAGCCAAGTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                     sequence
                                                                                                                                                                                                                                                                                                                                    0,
                                                                                                                                                                                                                                                                                                                                Score 480; DB 18;
Pred. No. 2.1e-141;
0; Mismatches 115;
                                                                                                                                                                                                                                                                                                                                                                Length 1479;
                                                                                                                                                                                                                                                                                                                                                                                                                    in anti-CD3
                                                                                                                                                                                                                                                                                                                                  Indels
                                 CGCTCGGAGGGG
                                                                                                                                                                                                                                                                                                                                  18;
                                                                                                                                                                                                                                                                                                                                                                                                                  part
                                                                                                                                                                                                                                                                                                                                  Gaps
                               293
                                                                                                                                                                                                                               122
                                                                                                                                 182
                                                                                                                                                                  182
                                                              242
                                                                                               242
                                                                                                                                                                                                   122
                                                                                                                                                                                                                                                                   62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                593
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 533
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  422
```

```
CURRENT APPLICATION NUMBER: US/10/682,845
CURRENT FILING DATE: 2003-10-10
PRIOR APPLICATION NUMBER: US 60/419,149
PRIOR FILING DATE: 2002-10-18
PRIOR APPLICATION NUMBER: CA 2,403,313
PRIOR FILING DATE: 2002-10-11
NUMBER OF SEQ ID NOS: 89
SOFTWARE: Patentin version 3.1
SEQ ID NO 78
LENGTH: 1479
                                                                                                                                                                                                                                                                                                                                                                                                               OTHER INFORMATION: SCFV EDCAMXCD3 with M20 mutant in anti-CD3 part US-10-682-845-78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 13
US-10-682-845-78
                                                                                                                                                                                                                                                                                                                             Query Match
Best Local S
Matches 587
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
APPLICANT: Lahzavechia, Antonio
TITLE OF INVENTION: Potent T cell modulating
FILE REFERENCE: G2296 US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 78, Application US/10682845 Publication No. US20040162411A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: DNA
ORGANISM: artificial sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURE:
                                                                                 123
                                                                                                                         123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  363
      183
                                            183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 654
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          534
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     294
                                                                                                                                                                                                         63
                                                                                                                                                             63 CACCTGCAAGGCCAGTCAGAATGTGGGTACTAATGTAGCCTGGTATCAACAGAAACCAGG
                                                                                                                                                                                                                                               ω
                                                                                                                                                                                                                                                                  3 TATTGTGATGACCCAGACTCCCAAATTCCTGCTTGTATCAGCAGGAGAGACAGGGTTACCAT
                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                               GCAGTCTCCGAAACTGCTGATATACTCTGCATCCAATCGCTACACTGGAGTCCCTGATCG
                                                                                                                                                                                                   AACCTGCAAGGCCAGTCAGAGTGTGAGTAATGATGTGGCTTGGTTACCAACAGAAGCCAGG
                                                                                                                                                                                                                                           TATCCAGCTGACCCAGTCTCAAAAATTCATGTCCACATCAGTAGGAGACAGGGTCAGCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATCGCAGGTGCAGGTGAAGGAGTCAGGACCTGGCCTGGTGGCGCCCCTCACAGAGCCTGTC
                           CTTCACTGGCAGTGGATATGGGACGGATTTCACTTTCACCATCAGCACTGTGCAGGCTGA
                                                                               GCAATCTCCTAAAGCACTGATTTACTCGGCATCCTACCGGTACAGTGGAGTCCCTGATCG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGGTAACTACGGCTATGCTTTGGACTACTGGGGTCAAGGAACCTCAGTCACCGTCTCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTTAAAAATGAACAGTCTGCAAACTGATGACACAGCCATGTACTACTGTGCCAGTCGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TAATGCAGCTTTCATATCCAGACTGAGCATCAGCAAGGACAATTCCAAGAGCCAAGTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CATCACTTGCACTGTCTCTGGGTTTTCATTAACCAATTATGGTGTACACTGGGTTCGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TTCTCAGGTGAAACTGCAGGAGTCAGGACCTGGCCTAGTGCAGCCCTCACAGAGCCTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GACCAAGCTGGAAATAAAAGGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCGG
  CTTCACAGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAATGTGCAGTCTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TAATTCGGCTCTTATGTCCAGACTGAGCATCAGCAAGGACAACTCCAAGAGCCAAGTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GTCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTGATATGGAGTGGTGGAAGCACAGACTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGCTGGTGGAAGCACAAATTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CATCACCTGCACAGTCTCTGGTTTCTCATTAACTAGCTATGGTGTACACTGGGTTCGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTTTAAAATGAACAGTCTGCAAGCTAATGACACAGCCATATATTACTGTGCCAGAATGG-
                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       - AGAACTGGTCGTTTGCTTACTGGGGCCAAGGGACCACGGTCACCGTCTCCTC
                                                                                                                                                                                                                                                                                                                                              67.2%;
81.5%;
                                                                                                                                                                                                                                                                                                                         Score 480; DB 18;
Pred. No. 2.1e-141;
0; Mismatches 115;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      molecules
                                                                                                                                                                                                                                                                                                                                                                 Length 1479;
                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                             18;
                                                                                                                                                                                                                                                                                                                             Gaps
                                       242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          473
                                                                               182
                                                                                                                       182
                                                                                                                                                                                                   122
                                                                                                                                                                                                                                             62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    713
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            713
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        653
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        533
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             362
                                                                                                                                                             122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        593
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              422
                               Ş
                                                                               밁
                                                                                                                   Ś
                                                                                                                                                           片
                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-10-682-845-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                片
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           맑
                                                                                                                                                                                                                                                                                                                             US-10-682-845-80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 80, Application US/10682845 Publication No. US20040162411A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                         SOFTWARE: PatentIn version 3.1
SEQ ID NO 80
LENGTH: 1479
                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
                                                                                                                                                                                                                                             Matches 587;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CURRENT APPLICATION NUMBER: US/10/682,845
CURRENT FILLING DATE: 2003-10-10
PRIOR APPLICATION NUMBER: US 60/419,149
PRIOR FILING DATE: 2002-10-18
PRIOR APPLICATION NUMBER: CA 2,403,313
PRIOR FILING DATE: 2002-10-11
NUMBER OF SEQ ID NOS: 89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Lanzavecchia, Antonio
TITLE OF INVENTION: Potent T cell modulating
FILE REFERENCE: G2296 US
                                                                                                                                                                                                                                                                                                                                              OTHER INFORMATION: scrv
                                                                                                                                                                                                                                                                                                                                                                 ORGANISM: artificial sequence FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        534
123
                                     123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         354 ATCGCAGGTGCAGGTGAAGGAGTCAGGACCTGGCCCTGGTGGCGCCCCTCACAGAGCCTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 243
                                                                               63
                                                                                                       63 AACCTGCAAGGCCAGTCAGAGTGTGAGTAATGATGTGGCTTGGTTACCAACAGAAGCCAGG
                                                                                                                                                                                                     w
                       GCAGTCTCCGAAACTGCTGATATACTCTGCATCCAATCGCTACACTGGAGTCCCCTGATCG
                                                                                                                                                                                                 TATTGTGATGACCCAGACTCCCAAATTCCTGCTTGTATCAGCAGGAGACAGGGTTACCAT
GCAATCTCCTAAAGCACTGATTTACTCGGCATCCTACCGGTACAGTGGAGTCCCTGATCG
                                                                               CACCTGCAAGGCCAGTCAGAATGTGGGTACTAATGTAGCCTGGTATCAACAGAAACCAGG
                                                                                                                                                             TATCCAGCTGACCCAGTCTCAAAAATTCATGTCCACATCAGTAGGAGACAGGGTCAGCGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GGGTAACTACGGCTATGCTTTGGACTACTGGGGTCAAGGAACCTCAGTCACCGTCTCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CTTTAAAATGAACAGTCTGCAAGCTAATGACACAGCCATATATTACTGTGCCAGAATGG-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTTAAAAATGAACAGTCTGCAAACTGATGACACAGCCATGTACTACTGTGCCAGTCGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TAATGCAGCTTTCATATCCAGACTGAGCATCAGCAAGGGACAATTCCAAGAGCCAAGTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TAATTCGGCTCTTATGTCCAGACTGAGCATCAGCAAGGACAACTCCAAGAGCCAAGTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GTCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTGATATGGAGTGGTGGAAGCACAGACTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GCCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGCTGGTGGAAGCACAAATTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CATCACCTGCACAGTCTCTGGTTTCTCATTAACTAGCTATGGTGTACACTGGGTTCGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CATCACTTGCACTGTCTCTGGGTTTTCATTAACCAATTATGGTGTACACTGGGTTCGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TTCTCAGGTGAAACTGCAGGAGTCAGGACCTGGCCTAGTGCAGCCCTCACAGAGCCTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GACCAAGCTGGAAATAAAAGGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGACTTGGCAGAGTATTTCTGTCAGCAATATAACAGCTATCCGCTCACGTTCGGTGCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -AGAACTGGTCGTTTGCTTACTGGGGCCAAGGGACCACGGTCACCGTCTCCTC
                                                                                                                                                                                                                                                            67.2%;
                                                                                                                                                                                                                                                                                                                                              EpCAMxCD3 with M31 mutant
                                                                                                                                                                                                                                         <u>,</u>
                                                                                                                                                                                                                                         Score 480; DB 18;
Pred. No. 2.1e-141;
0; Mismatches 115;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      molecules
                                                                                                                                                                                                                                             115;
                                                                                                                                                                                                                                                                                                                                              'n
                                                                                                                                                                                                                                                                             Length
                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                              anti-CD3
```

713

713

661 653 602 593 542 473

533 482 413 362 353 302

422

문 Ş 밁 Ś 뭥 Ś В 5 밁 Ś 밁 S 밁 á

В Ş 밁 Ś 밁 Ş

18;

Gaps

182

122

62

122

part

```
CURRENT APPLICATION NUMBER: US/10/682,845
; CURRENT FILING DATE: 2003-10-10
; PRIOR APPLICATION NUMBER: US 60/419,149
; PRIOR FILING DATE: 2002-10-18
; PRIOR FILING DATE: 2002-10-11
; PRIOR FILING DATE: 2002-10-11
; NUMBER OF SEQ ID NOS: 89
; SOFTWARE: Patentin version 3.1
; SEQ ID NO 82
; LENGTH: 1479
; TYPE: DNA
; ORGANISM: artificial sequence
; PATURE: INFORMATION: SCFV EPCAMXCD3 with M58 mutant in anti-CD3 par's US-10-682-845-82
                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 15
US-10-682-845-82
Sequence 82, Application US/10682845
Publication No. US20040162411A1
GENERAL INFORMATION:
APPLICANT: Lanzavecchia, Antonio
TITLE OF INVENTION: Potent T cell modulating
FILE REFERENCE: G2296 US
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          á
                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ঠ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
 밁
                     Ś
                                                                                    Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                  Query Match
Best Local S
                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         483
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      474
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                414
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         303
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        654
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     603
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 594
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           534
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           183
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                243
 63
                            63
                                                         w
                                                                                     ω
                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GACCAAGCTGGAAATAAAAGGTGGAGGCGGTTCAGGCGGAGGTGGCTTTGGCGGTGGCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GGGTAACTACGGCTATGCTTTTGGACTACTGGGGTCAAGGAACCTCAGTCACCGTCTCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CATCACCTGCACAGTCTCTGGTTTCTCATTAACTAGCTATGGTGTACACTGGGTTCGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CATCACTTGCACTGTCTCTGGGTTTTCATTAACCAATTATGGTGTACACTGGGTTCGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TTCTCAGGTGAAACTGCAGGAGTCAGGACCTGGCCTAGTGCAGCCCTCACAGAGCCCTGTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATCGCAGGTGCAGGTGAAGGAGTCAGGACCTGGCCTGGTGGCGCCCTCACAGAGCCTGTC
CACCTGCAAGGCCAGTCAGAATGTGGGTACTAATGTAGCCTGGTATCAACAGAAACCAGG
               AACCTGCAAGGCCAGTCAGAGTGTGAGTAATGATGTGGCTTGGTACCAACAGAAGCCAGG
                                                                            TATTGTGATGACCCAGACTCCCAAATTCCTGCTTGTATCAGCAGGAGACAGGGTTACCAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ----AGAACTGGTCGTTTGCTTACTGGGGCCAAGGGACCACGGTCACCGTCTCCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTTAAAAATGAACAGTCTGCAAACTGATGACACACGCCATGTACTACTGTGCCAGTCGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TAATGCAGCTTTCATATCCAGACTGAGCATCAGCAAGGACAATTCCAAGAGCCAAGTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TAATTCGGCTCTTATGTCCAGACTGAGCATCAGCAAGGGACAACTCCAAGAGCCCAAGTTTT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GTCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTGATATGGAGTGGTGGAAGCACAGACTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GCCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGCTGGTGGAAGCACAAATTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGACCTGGCAGTTTATTTCTGTCAGCAGGATTATAGCT-----CGCTCGGAGGGGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTTCACTGGCAGTGGATATGGGACGGATTTCACTTTCACCATCAGCACTGTGCAGGCTGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTTTAAAATGAACAGTCTGCAAGCTAATGACAGCCATATATTACTGTGCCAGAATGG-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AGACTTGGCAGAGTATTTCTGTCAGCAATATAACAGCTATCCGCTCACGTTCGGTGCTGG
                                                         TATCCAGCTGACCCAGTCTCAAAAATTCATGTCCACATCAGTAGGAGACAGGGTCAGCGT
                                                                                                                    Conservative
                                                                                                                               67.2%;
81.5%;
                                                                                                                    0;
                                                                                                                 Score 480; DB 18;
Pred. No. 2.1e-141;
0; Mismatches 115;
                                                                                                                                                                                                                                                                                                                                                                                                                         molecules
                                                                                                                                            Length 1479;
                                                                                                                    Indels 18;
                                                                                                                                                                                            part
                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           593
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 473
 122
                             122
                                                           62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            713
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        713
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   653
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               602
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      533
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               422
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           242
```

В	δ	뮹	Ş	F	Ş	B	Ş	뮹	Ş	Вρ	Ş	В	Ş	뮹	Ş	망	ઇ	뭥	Ş
662AGAACTGGTCGTTTGCTTACTGGGGCCAAGGGACCACGGTCACCGTCTCCTC 713	654 GGGTAACTACGGCTATGCTTTGGACTACTGGGGTCAAGGAACCTCAGTCACCGTCTCCTC 713	603 CTTTAAAATGAACAGTCTGCAAGCTAATGACACAGCCATATATTACTGTGCCAGAATGG- 661	594 CTTAAAAATGAACAGTCTGCAAACTGATGACACAGCCATGTACTACTGTGCCAGTCGGGG 653	543 TAATGCAGCTTTCATATCCAGACTGAGCATCAGCAAGGACAATTCCAAGAGCCAAGTTTT 602	534 TAATTCGGCTCTTATGTCCAGACTGAGCATCAGCAAGGACAACTCCAAGAGACCAAGTTTT 593	483 GTCTCCAGGAAAGGGTCTGGAGTGGCTGGATATGGAGTGGTGGAAGCACAGACTA 542	474 GCCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGCTGGAGGAGCACAAATTA 533	423 CATCACCTGCACAGTCTCTGGTTTCTCATTAACTAGCTATGGTGTACACTGGGTTCGCCA 482	414 CATCACTTGCACTGTCTCTGGGTTTTCATTAACCAATTATGGTGTACACTGGGTTCGCCA 473	363 TTCTCAGGTGAAACTGCAGGAGTCAGGACCTGGCCTAGTGCAGCCCTCACAGAGCCTGTC 422	354 ATCGCAGGTGCAGGTGAAGGAGTCAGGACCTGGCCTGGTGGCGCCCTCACAGAGCCTGTC 413	303 GACCAAGCTCGAGATCAAAGGTGGTGGTGGTTCTGGCGGCGGCGGCTCCGGTGGTGGTG	294 GACCAAGCTGGAAATAAAAGGTGGAGGCGGTTCAGGCGGAGGTGGCTCTGGCGGTGGCGG 353	243 AGACTTGGCAGAGTATTTCTGTCAGCAATATAAACAGCTATCCGCTCACGTTCGGTGCTGG 302	243 AGACCTGGCAGTTTATTTCTGTCAGCAGGATTATAGCTCGCTCGGAGGGGG 293	183 CTTCACAGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAATGTGCAGTCTGA 242	183 CTTCACTGGCAGTGGATATGGGACGGATTTCACTTTCACCATCAGCACTGTGCAGGCTGA 242	123 GCAATCTCCTAAAGCACTGATTTACTCGGCATCCTACCGGTACAGTGGAGTCCCTGATCG 182	123 GCAGTCTCCGAAACTGCTGATATACTCTGCATCCAATCGCTACACTGGAGTCCCTGATCG 182

Search completed: February 19, 2005, 02:16:20 Job time : 466.528 secs

*			
		4	

```
Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Run
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Post-processing: Minimum Match 0%
Maximum Match 100%
. Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OM nucleic - nucleic search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence:
                                                                                                                                ი
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               95
            110
111
113
114
115
116
117
118
119
119
123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
         284
280.8
280.8
280.8
262.4
262.4
262.4
262.4
262.4
262.4
262.4
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
250.8
25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    seq length: 0
seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query
Match Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             February 18, 2005, 20:04:30 ; Search time 2561.12 Seconds (without alignments)
10611.722 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       34239544 seqs, 19032134700 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                IDENTITY_NUC
Gapop 10.0 , Gapext 1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 agtattgtgatgacccagac.....cctcagtcaccgtctcctca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-075-947A-2
714
         EST:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GenCore version 5.1.6 Copyright (c) 1993 - 2005 Compugen Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        gb_est3:
gb_est4:*
gb_est5:*
gb_est6:*
gb_gss1:*
gb_gss2:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        gb_est1:*
gb_est2:*
gb_htc:*
         DB
      B1690298
B1795291
CAS775621
CAS775629
BF182141
BB309592
BF5781599
BF5781599
BBQ94047446
BPG979344
COS67793
COS67793
COS68560
BF5880610
BF5880610
BF5880610
BF58061745985
COS662905
BF733751
COS677459
BF733751
COS677454
BF733751
COS677454
BF733751
COS677454
BF733751
COS677454
BF733751
COS677454
BF733751
COS677454
BF733751
COS67744
COS67744
COS6774
BF733751
COS6774
COS6774
COS6774
BF733751
COS6774
COS6774
BF733751
BF7337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      IJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               68479088
B1690298 603309721
BU522581 AGENCOURT
CA577562 K0711809-
BF182141 601804682
BE309592 601094894
BF578188 602094691
BQ940476 FOEWARD
GROUNT
CR047446 FOEWARD
GROUNT
CR0567792 AGENCOURT
CO556792 AGENCOURT
CO558560 AGENCOURT
CO558560 AGENCOURT
BF580611 602093730
BU522894 AGENCOURT
BF580616 602093751
BY733751 BY733751
CO56283 AGENCOURT
CO56283 AGENCOURT
CO56283 AGENCOURT
CO56283 AGENCOURT
CO56283 AGENCOURT
CO56283 AGENCOURT
CO56746 AGENCOURT
CO567469 AGENCOURT
CO567469 AGENCOURT
BH275985 CH230-96J
BH275985 CH230-96J
BG9731263 602091082
BY221929 BY221929
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              714
```

ORIGIN	FEATURES SOU	RESULT 1 BI690298 LOCUS DEFINITION ACCESSION VERSION VERSION KEYWORDS SOURCE ORGANISM REFERENCE AUTHORS TITLE TOTILE TOTILE TOTILE COMMENT	4 4 4 4 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 222222 2005
/mol_type="mRNA" /strain="FVB/N" /db xref="taxon:10090" /clone="IMAGE:3345741" /sex="female, virgin" /tissue_type="infiltrating ductal carcinom /dev stage="5 months" /dev stage="5 months" /lab host="DH1OB" /clone_lib="NCI_CGAP_Mam6" /note="Organ: mammary; Vector: pCMV-SPORT6 Site_2: Not1; Cloned unidirectionally. Pr Library constructed by Life Technologies. providing samples: Jeffrey Green, M.D., NI	rce	BI690298  BI690298  MENNA Sequence.  BI690298  BI690298.1 GI:15652927  EST.  Mus musculus (house mouse)  Mus musculus (house mouse)  Mus musculus  Bikaryota; Metazoa; Chordata; Craniata; Vertebrata;  Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae;  1 (bases 1 to 840)  NHH-MGC http://mgc.nci.nih.gov/.  National Institutes of Health, Mammalian Gene Collec  Unpublished (1999)  Contact: Robert Strausberg, Ph.D.  Email: Cogarbs-remail.nih.gov/.	213. 29.7 425 2 BF578521 212 29.7 425 2 BF578521 212 29.7 994 5 BU523154 209.8 29.4 673 8 BH065089 209.8 29.4 675 7 CO202765 205.2 29.7 706 7 CK947954 204.2 28.6 669 7 CF108094 204.2 28.6 915 5 BU523787 202.6 28.4 974 2 BF578595 202.6 28.4 974 2 BF578595 202.6 28.4 974 2 BF578595 202.2 28.3 985 7 CO203765 201.8 28.3 982 7 CO203049 201.8 28.3 489 2 BF581877 202 28.3 489 2 BF581877 202 28.3 489 2 BF578595 201.4 28.3 489 2 BF376735 201.4 28.3 489 2 BF376735 201.4 28.3 489 2 BF376735 201.4 28.3 489 7 CO2032444 201.8 28.3 489 7 CO2032444 201.8 28.3 489 7 CO2032444 201.8 28.3 489 7 CO202245 201.4 28.2 859 7 CO202245	237 33.2 679 6 BY751118  229.4 32.1 409 6 CB805016 CB805016  226 31.7 359 2 BB870665 BB870665  216.6 30.3 918 2 BF135931 BF135931  215.6 30.2 590 8 BZ168874 BZ168874  213.8 29 9 694 2 BF14574 BF14374
a" ; Site 1: SalI; imer: Ōligo dT. Investigator	ean be	EST 18-SEP-2001 AGE:5345741 5', Buteleostomi; Murinae; Mus.	602092959 AGENCOURT RPCI-24-3 Oa splbn 4072740 B Shultzomi AGENCOURT AGENCOURT AGENCOURT 602093306 602093330 Oa splbn	BY751118 AMGNNUC: T BB870665 601781261 CH230-267

Query Match Best Local Similarity

43.7%;

Score 312; DB 4; Pred. No. 7.4e-80;

Length 840;

```
REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 2
BU522581
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VERSION
KEYWORDS
                                                                                                                                                                                                                                                                            FEATURES
                                    ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JOURNAL
                                                                                                                                                                                                                                                           source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            579
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  519
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          699
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 639
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               237
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             336;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGENCOURT 10154040 NCI CGAP CO24 Mus musculus cDNA clone IMAGE:6529074 5', mRNA sequence.
BU522581
BU522581.1 GI:22830107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mus musculus (house Mus musculus
                                                                                                                                                                                                                                                                                                                                                CDNA Library Preparation: Life Technologies, Inc. CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Agencourt Bioscience Corporation Clone distribution: MGC clone distribution information can found through the I.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                          Email: cgapbs-r@mail.nih.gov
Tissue Procurement: The Cepko Laboratory
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 (bases 1 to 861)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection
Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                             http://image.llnl.gov
Plate: LLAM14128 row: j column:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CAAGAGCCAAGTTTTCTTAAAAATGAACAGTCTGCAAACTGATGACACAGCCATGTACTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACACTGGGTTCGCCAGCCCTCCAGGAAAGGGTCTGGGAGTGGCTGGGGAGTAATATGGGCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CTCACAGAGCCTGTCCATCACATGCACTGTCTCTGGGTTCTCATTAACCAGCTATGGTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CCCAAGCTGTATCCTTTCCCAGGTGCAGCTGAAGCAGTCAGGACCTGGCCTAGTGGCGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTGTGCCAGTCGGGGGGGTAACTACGGCTATGCTTTGGACTACTGGGGTCAAGGAACCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CAAGAGCCAAGTTTTCTTAAAAATGAACAGTCTGCAAACTGATGACACAGCCATGTACTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TGGAAGCACAAATTATAATTCGGCTCTTATGTCCAGACTGAGCATCAGCAAGGACAACTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AGACTGGGTTCGCCAGTCTCCAGGAAAGGGTCTGGAGTGGCTGGAGTGATATGGGGTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTCACAGAGCCTGTCCATCACTTGCACTGTCTCTGGGTTTTCATTAACCAATTATGGTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTCTGGCGGTGGCGGATCGCAGGTGCAGGTGAAGGAGTCAGGACCTGGCCTGGTGGCCGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGTCACCGTCTCCTCA 432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AGTCACCGTCTCCTCA 714
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CTGTGCCAGTGGGGGTTACTAACGGAGGGTGCTATGGACTACTGGGGTCAAGGAACCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TGGAAGCACAAATTATAATTCAGCTCTCAAATCCAGACTGAGCATCAGCAAGGACAACTC
                                                                                                                                                                                                                                                                                             quality sequence stop:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                          /clone="IMAGE:6529074"
/lab_host="HH10B (T1 phage-resistant)"
/clone lib="NCI CGAP CO24"
/note="Organ: colon; Vector: pCMV-SPORT6; Site_1: NotI;
Site_2: SalI; Cloned unidirectionally. Primer: Oligo d'Average insert size 1.6 kb. Constructed by Life Technologies. Note: this is a NCI_CGAP Library."
                                                                                                                                                                                                     /mol_type="mRNA"
/strain="FVB/N"
                                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                                                                                                                                                                                     organism="Mus musculus"
                                                                                                                                                                               _xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                               723.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Craniata; Veri
Sciurognathi;
                                                                                                                                                                                                                                                                                                               18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             40;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Vertebrata; Euteleostomi;
thi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EST 13-SEP-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                     àq.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         518
                                                                                      ц
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   698
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              416
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         638
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  578
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 3
CA577562
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                        COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                        JOURNAL
                                                                                                                                                                                               source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     702
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          361
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   301
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      345 CGGTGGCGGATCGCAGGTGCAGGTGAAGGAGTCAGGACCTGGCCTGGTGGCGCCCTCACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          325;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          K0711B09-5N NTA Mouse Hematopoietic Stem Cell (Lin-/c-Kit-/Sca-1-) CDNA Library (Long) Mus musculus cDNA clone NIA:K0711B09 IMAGE:30074612 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                     Piao,Y., Kargul,G.J., Dudekula,D.B., Qian,Y., Luo,A., Ca: Aiba,K., Taub,D., Longo,D.L., Keller,J. and Ko,M.S.H. Systematic Analyses of NIA Mouse Hematopoietic Stem Cell (Lin-/c-Kit-/Sca-1-) cDNA Library (Long)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
1 (bases 1 to 480)
                                                                                                                                                                                                                                                                        Seq primer: M13 Reverse
                                                                                                                                                                                                                                                                                           Email: cdna@lgsun.grc.nia.nih.gov
Plate: K0711 row: B column: 09
                                                                                                                                                                                                                                                                                                                            Laboratory of Genetics
National Institute on Aging/National Institutes of Health
333 Cassell Drive, Suite 4000, Baltimore, MD 21224-6820, U
                                                                                                                                                                                                                                                                                                                                                                                                      Unpublished (2001)
                                                                                                                                                                                                                                                                                                                                                                                        Contact: Dawood B. Dudekula
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CA577562.1 GI:25125953
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CACCGTCTCCTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CACCGTCTCCTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CAGACTCTTGTACTATGGTGCCCACTATGCTATGGACTACTGGGGGTCAAGGAACCTCAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CAGTC---GGGGGGGTAACTACGGCTATGCTTTGGACTACTGGGGTCAAGGAACCTCAGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCAAGITTTCTTAACATTGAACAGTCTCCAAACTGATGACACAGCCATGTACTACTGTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCAAGTTTTCTTAAAAATGAACAGTCTGCAAACTGATGACACAGCCATGTACTGTGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CACAAACTATAATTCAGCTCTCAAATCCAGACTGAGCATCAGCAAGGACAACTCCAAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CACAAATTATAATTCGGCTCTTATGTCCAGACTGAGCATCAGCAAGGACAACTCCAAGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGTTCGCCAGCCTCCAGGAAAGGGTCTGGAGTGGCTGGTATTGATATGGAGTGATGGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GGTTCGCCAGCCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGCTGGTGGAAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GAGCCTGTCCATCACATGCACCGTCTCAGGGTTCTCATTAACCAGCTATGGTATACACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GAGCCTGTCCATCACTTGCACTGTCTCTGGGTTTTCATTAACCAATTATGGTGTACACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTGTGTCCTGTCCCAGGTGCAGCTGCAGGAGACAGGACCTGGCCTGGTGGCCCCTCACA
                                                                                                                                                                                                                                                     quality sequence stop:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
/lab_host="DH10B"
                                                                                                                     /mol_type="mRNA"
/strain="C57BL/6NCr"
/db_xref="niaEST:K0711B09-5N"
                                                /tissue_type="Hematopoietic Stem Cell
(Lin-/c-Kit-/Sca-1-)"
                                                                                      clone="NIA:K0711B09 IMAGE:30074612"
                                                                                                        B
                                                                                                                                                                                                                  Location/Qualifiers
                                                                                                                                                                               organism="Mus musculus"
                                                                                                        xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        39.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     714
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ,.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 285; DB 5;
Pred. No. 6.1e-72;
D; Mismatches 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EST 19-NOV-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Carter, M.G.,
                                                                                                                                                                                                                                                                                                                                    USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              420
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     120
```

밁 Ś

δ

吊

Ş

밁

Ś 밁 Ś 밁 ð 밁 á

р

```
ACCESSION
VERSION
KEYWORDS
                                                                                                                                            RESULT 4
BF182141
                                                                                                                   DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
                                    ORGANISM
                                                                                                                                                                                                    367
                                                                                                                                                                                                                            697
                                                                                                                                                                                                                                                        307
                                                                                                                                                                                                                                                                                  639
                                                                                                                                                                                                                                                                                                             247
                                                                                                                                                                                                                                                                                                                                      579
                                                                                                                                                                                                                                                                                                                                                                   187
                                                                                                                                                                                                                                                                                                                                                                                            519
                                                                                                                                                                                                                                                                                                                                                                                                                       127
                                                                                                                                                                                                                                                                                                                                                                                                                                                  459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      326;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             67
                                                              BF182141
BF182141.1
EST.
                                                                                               BF182141
601804682F1 NCI_CGAP_Mam5
mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  7
Mus musculus
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                Mus musculus (house mouse)
                                                                                                                                                                                                                                                       CAAGAGCCAAGTTTTCTTAAAAATGAACAGTCTGCAAACTGATGACACAGCCATGTACTA 638
                                                                                                                                                                                                                                                                                                                                                                               TGGAAGCACAAATTATAATTCGGCTCTTATGTCCAGACTGAGCATCAGCAAGGACAACTC
                                                                                                                                                                                                                                                                                                                                                                                                                                     ACACTGGGTTCGCCAGCCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CTCACAGAGCCTGTCCATCACCTGCACAGTCTCTGGTTTTCTCATTAACTAGCTATGGTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTCACAGAGCCTGTCCATCACTTGCACTGTCTCTGGGGTTTTCATTAACCAATTATGGTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  cceaaccrererectacccaesrecaecreaaecaercaesaccreeccraerecaecc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTCTGGCGGTGGCGGATCGCAGGTGCAGGTGAAGGAGTCAGGACCTGGCCCTGGTGGCGCCC
                                                                                                                                                                                                                                                                                                             CAAGAGCCAAGTTTTCTTTAAAATGAACAGTCTGCAAGCTGATGACACAGCCATATATTA
                                                                                                                                                                                                                                                                                                                                                                                                                       ACACTGGGTTCGCCAGTCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTGATATGGAGTGG
                                                                                                                                                                                                                            TCAGTCACCGTCTCCTCA 714
                                                                                                                                                                                                                                                                                                                                                                 TGGAAGCACAGACTATAATGCAGCTTTCATATCCAGACTGAGCATCAGCAAGGACAATTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /clone_lib="NIA Mouse Hematopoietic Stem Cell
(Lin-/C-Kit-/Sca-1-) CDNA Library (Long)"
/note="Wector: psPoRT1 (Invitrogen); Site_1: SalI; Site_2:
NotI; Mouse cDNA project by the Laboratory of Genetics,
National Institute on Aging (NIA), Intramural Research
Program, NIH (http://lgsmu.grc.nia.nih.gov/cDNA). This is
a long-transcript enriched cDNA library (Ref. Genome Res.
11: 1553-1558 (2001). [PMID: 11544199]). Total RNAs were
                                                                            GI:11060283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   39.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      <u>,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 284; DB 6
Pred. No. 1e-71;
0; Mismatches
                                                                                                                                 671 bp
                                                                                                                   Mus musculus
                                                                                                                                 mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                6,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      50;
                                                                                                                     CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 480;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                   linear EST 31-OCT-2000
A clone IMAGE:4035429 5',
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                  696
                                                                                                                                                                                                                                                                                                                                                                                            578
                                                                                                                                                                                                                                                                                                                                                                                                                                                 518
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                66
                                                                                                                                                                                                                                                       366
                                                                                                                                                                                                                                                                                                                                                                                                                       186
                                                                                                                                                                                                                                                                                                                                                                246
                                                                                                                                                                                                                                        닭
                                                                                                                                                                                                                                                                 S
                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                     á
                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                 S
                                                                                                                                 밁
                                                                                                                                                      ঠ
                                                                                                                                                                                     밁
                                                                                                                                                                                                           S
                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
```

S 밁 Ś 밁 S 밁 Ş 밁 ঠ 밁 S 문

GI:9168025

```
ACCESSION
VERSION
                                                     RESULT 5
BE309592
LOCUS
DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches 320;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Bource
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local
                                                                                                                                                                                                          694
                                                                                                                                                                                                                                               334
                                                                                                                                                                                                                                                                                                                                                               574
                                                                                                                                                                        394
                                                                                                                                                                                                                                                                                     634
                                                                                                                                                                                                                                                                                                                           274
                                                                                                                                                                                                                                                                                                                                                                                                    214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        334
                                                                                                                                                                                                                                                                                                                                                                                                                                        514 GCTGGTGGAAGCACAAATTATAATTCGGCTCTTATGTCCAGACTGAGCATCAGCAAGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  34
                                   BE309592
601094848F1 NCI_CGAP_Mam5
mRNA_sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Lothar Hennighausen Ph.D., Robin Humphreys
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can be
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 (bases 1 to 671)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
BE309592
BE309592.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Plate: LLAM9309 row: d column: High quality sequence stop: 669.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Contact: Robert Strausberg, Ph.D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GGTGGCTCTGGCGGTGGCGGATCGCAGGTGCAGGTGAAGGAGTCAGGACCTGGCCTTGGTG
                                                                                                                                                                                                                                                 TATTACTGTGTAAGACGCTCCAGTCGTAGTCCCTATGTTATGGACTACTGGGGTCAAGGA
                                                                                                                                                                                                                                                                         TACTACTGTGCCAGTCGGGGGGAACTACCGCTATGCTTTGGACTACTGGGGTCAAGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGTGTACACTGGGTTCGCCAGCCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTAATATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCGCCCTCACAGAGCCTGTCCATCACTTGCACTGTCTCTGGGTTTTCATTAACCAATTAT
                                                                                                                                                                        ACCTCAGTCACCGTCTCCTCA 414
                                                                                                                                                                                              ACCTCAGTCACCGTCTCCTCA 714
                                                                                                                                                                                                                                                                                                                                                               AACTCCAAGAGCCAAGTTTTCTTAAAAATGAACAGTCTGCAAACTGATGACACAGCCATG
                                                                                                                                                                                                                                                                                                                                                                                                    GATATAACCTGGATTCGCCAAACACCAGGAAAGGGTCTGGAGTGGCTTGGAGTAATATGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GCGCCCTCACAGAGCCTGTCCATTATCTGCACTGTCTCTGGATTCTCATTAACCAGCTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GCTTTCCCAAGTTGTACCCTGTCCCAGGTGCAACTGAAGGAGTCAGGACCTGGCCTGGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /clone_lib="NCI_CGAP_Mam5"
/note="Organ: mammary; Vector: pCMV-SPORT6; Site_1: Sall/site_2: NotI; Cloned unidirectionally. Primer: Ōligo d1 Library constructed by Life Technologies. Investigators providing samples: Lothar Hennighausen/Robin Humphreys, NIH"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /tissue_type="tumor, gross
/dev_stage="7 months"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /mol_type="mRNA"
/strain="mix FVB/N, C5
/db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1. .671
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                clone="IMAGE:4035429"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            39.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 283.4; DB 2;
Pred. No. 1.7e-71;
0; Mismatches 61;
                                                         594 bp mRNi
Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     C57BL/6J"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        22
                                                                           mRNA
                                                         cDNA clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length
                                                         EST 26-OCT-2000
IMAGE:3489635 5',
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SalI;
go dT.
                                                                                                                                                                                                                                                                                                                                                               633
                                                                                                                                                                                                                                                                                                                                                                                                                                      573
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             453
                                                                                                                                                                                                                                                                                     693
                                                                                                                                                                                                                                                                                                                         333
                                                                                                                                                                                                                                                                                                                                                                                                    273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   513
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
```

```
RESULT 6
BF578188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
AUTHORS
                                                                                                                                          밁
                                                                                                                                                                       Š
                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                              Ś
                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                          á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOURCE
ORGANISM
 ACCESSION
                                   DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              source
                                                                                                                                          347
                                                                                                                                                                             292
                                                                                                                                                                                                                287
                                                                                                                                                                                                                                                 241
                                                                                                                                                                                                                                                                                    227
                                                                                                                                                                                                                                                                                                                      181
                                                                                                                                                                                                                                                                                                                                                         167
                                                                                                                                                                                                                                                                                                                                                                                            121
                                                                                                                                                                                                                                                                                                                                                                                                                             107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      310;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   47
              BF578188
602094691F1 NC
mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EST.
Mus musculus
Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Tissue Procurement: Lothar Hennighausen Ph.D., Robin Humphre CDNA Library Preparation: Life Technologies, Inc. CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Incyte Genomics, Inc. Clone distribution: MGC clone distribution information can
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mammalia; Eutheria; Rodentia; Sciurognath
1 (bases 1 to 594)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov
Plate: LLAM8530 row: o column: 12
High quality sequence stop: 591.
Location/Qualifiers
   BF578188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Email: cgapbs-r@mail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                         GGGCAGTCTCCGAAACTGCTGATATACTCTGCATCCAATCGCTACACTGGAGTCCCTGAT
                                                                                                                                                                GGGACCAAGCTGGAAATAAAAGGTGGAGGCGGTTCA 327
                                                                                                                                                                                                                                               GAAGACCTGGCAGTTTATTTCTGTCAGCAGGATTATAGCT------CGCTCGGAGGG 291
                                                                                                                                                                                                                                                                                                         CGCTTCACTGGCAGTGGATATGGGACGGATTTCACTTTCACCATCAGCACTGTGCAGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATAACCTGCAAGGCCAGTCAGAGTGTGAGTAATGATGTGGCTTGGTACCAACAGAAGCCA 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGTATTGTGATGACCCAGACTCCCAAATTCCTGCTTGTATCAGCAGGAGACAGGGTTACC
                                                                                                                                                                                                                                                                                                                                                         GGGCAGTCTCCTAAACTTCTGATATACTATGCATCCAATCGCTACACTGGAGTCCCTGAT
                                                                                                                                                                                                                                                                                                                                                                                                                             ATAACCTGCAAGGCCAGTCAGAGTGTGAGTAATGATGTAGCTTGGTACCAACAGAAGCCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AATGTTGTGATGACCCAGACTCCCAAATTCCTGCTTGTATCAGCAGGAGACAGGGTTACC
                                                                                                                                                                                                                GAAGACCTGGCATTTATT
                                                                                                                                                                                                                                                                                   CGCTTCACTGGCAGTGGATATGGGACGGATTTCACTTTCACCATCACCACTGTGCAGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     musculus (house
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /clone lib="NCI_CGAP_Mam5"
/note="Organ: mammary; Vector: pCMV-SPORT6; Site 1: SalI;
Site 2: NotI; Cloned unidirectionally. Primer: Oligo dT.
Library constructed by Life Technologies. Investigators
providing samples: Lothar Hennighausen/Robin Humphreys,
NIH"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /tissue_type="tumor, gross tissue"
/dev_stage="7 months"
/lab_host="DH10B"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /mol_type="mRNA"
/strain="mix FVB/N, C57BL/6J"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     clone="IMAGE:3489635"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            organism="Mus musculus"
                             691 bp mRNA linear EST 12-DEC-2000 NCI_CGAP_Co24 Mus musculus cDNA clone IMAGE:4209022 5',
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  39.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 280.8; DB 2;
Pred. No. 9.4e-71;
0; Mismatches 17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gene Collection
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 594;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Robin Humphreys
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (MGC)
                                                                                                                                                                                                                                                                                                                    240
                                                                                                                                                                                                                                                                                                                                                       226
                                                                                                                                                                                                                                                                                                                                                                                          180
                                                                                                                                                                                                                                                                                                                                                                                                                           166
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               106
                                                                                                                                                                                                                                                                                   286
                                                                                                                                                                                                                                                                                                                                                   Ś
                                                                                                                                                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δ
                                                                                                                                                                         밁
                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                           Ś
                                                                                                                                                                                                                                                                                                                    片
                                                                                                                                                                                                                                                                                                                                                                                          멼
                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
DEFINITION
```

```
RESULT 7
BQ940476
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Best Local
                                                                                                                                                                                                                                                                 639
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            399 CTCACAGAGCCTGTCCATCACTTGCACTGTCTCTGGGTTTTCATTAACCAATTATGGTGT
                                                                                                                                                                                                                      354
                                                                                                                                                                                                                                                                                                         294
                                                                                                                                                                                                                                                                                                                                                   579
                                                                                                                                                                                                                                                                                                                                                                                              234
                                                                                                                                                                                                                                                                                                                                                                                                                                    519
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         459 ACACTGGGTTCGCCAGCCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 339 CTCTGGCGGTGGCGGATCGCAGGTGCAGGTGAAGGAGTCAGGACCTGGCCTGGTGGCGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           322;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      54 CCCAAGCTGTGCCCTGTCCCAGGTGCAGCTGAAGGAGTCAGGACCTGGCCTGGTGGCGCC
BQ940476 970 bp mRNA linear EST AGENCOURT_8879458 NCI_CGAP_Co24 Mus musculus cDNA clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
Plate: LLAM9774 row: e column: 23
High quality sequence stop: 690.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalla; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus 1 (bases 1 to 691)

NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Jeffrey E. Green,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BF578188.1 GI:11651900
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Contact: Robert Strausberg,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                            AGTCACCGTCTCCTCA
                                                                                                                                                                                                                        CTGTGCCA
                                                                                                                                                                                                                                                     CTGTGCCAGTCGGGGGGAACTACGGCTATGCTTTGGACTACTGGGGTCAAGGAACCTC
                                                                                                                                                                                                                                                                                                           CAAGAGTCAAGTTTTCTTAAAAATGAACAGTCTGCAAACTGATGACACAGCCAGGTACTA
                                                                                                                                                                                                                                                                                                                                      CAAGAGCCAAGTTTTCTTAAAAATGAACAGTCTGCAAACTGATGACACAGCCATGTACTA
                                                                                                                                                                                                                                                                                                                                                                                              TGGAGGCACAAATTATAATTCAGCTCTCAAATCCAGACTGAGCATCAGCAAAGACAACTC
                                                                                                                                                                                                                                                                                                                                                                                                                                      TGGAAGCACAAATTATAATTCGGCTCTTATGTCCAGACTGAGCATCAGCAAGGACAACTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAGCTGGGTTCGCCAGCCACCAGGAAAGGGTCTGGAGTGGCTTGGAGTAATATGGACTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /lab_host="DH10B (T1 phage-resistant)"
/clone lib="NCI_CGAP_Co24"
/note="Organ: colon; Vector: pCMV-SPORT6; Site_1: Not1;
/site_2: Sal1; Cloned unidirectionally. Primer: Oligo dT
Average insert size 1.6 kb. Constructed by Life
Technologies. Note: this is a NCI_CGAP Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /strain="FVB/N"
/db_xref="taxon:10090"
/clone="IMAGE:4209022"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              'mol_type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                organism="Mus musculus")
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             38.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (house mouse)
                                                                                                                                   420
                                                                                                                                                                              714
                                                                                                                                                                                                                        GAAATCGCGACTGGGACTTTGACTACTGGGGCCAAGGCACCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 276; DB 2;
Pred. No. 2.5e-69;
0; Mismatches 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           45;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3.
D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 691;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9
                             21-AUG-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ьe
                                                                                                                                                                                                                                                                   698
                                                                                                                                                                                                                                                                                                           353
                                                                                                                                                                                                                                                                                                                                                   638
                                                                                                                                                                                                                                                                                                                                                                                              293
                                                                                                                                                                                                                                                                                                                                                                                                                                        578
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         518
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ď
                                                                                                                                                                                                                        404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 233
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      173
```

```
JOURNAL COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
VERSION
                                                                               8
                                                                                                               В
                                                                                                                                          ঠ
                                                                                                                                                                                                 ş
                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                   밁
맑
                   र्
                                                      밁
                                                                                                                                                                       밁
                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                     ঠ
                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local S
Matches 315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Bource
                                                                                   639
                                                                                                                294
                                                                                                                                             579
                                                                                                                                                                                                                                                                                           114
414
                                                      354
                                                                                                                                                                        234
                                                                                                                                                                                                    519
                                                                                                                                                                                                                                  174
                                                                                                                                                                                                                                                               459
                                                                                                                                                                                                                                                                                                                        399
                                                                                                                                                                                                                                                                                                                                                                                339
                                                                                                                                                                                                                                                                                                                                                    54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IMAGE:6475820 :
BQ940476
BQ940476.1 GI:
EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Email: cgapbs-r@mail.nih.gov
Tissue Procurement: The Cepko Laboratory
cDNA Library Preparation: Life Technologies, Inc.
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can
found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   National Institutes of Health, Mammalian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus 1 (bases 1 to 970)

NH-MGC http://mgc.nci.nih.gov/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Contact: Robert Strausberg, Ph.D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                            CTCACAGAGCCTGTCCATCACATGCACCGTCTCAGGGTTCTCATTAACCGACTATGGTGT
                                                                                                                               CAAGAGCCAAGTTTTCTTAAAAATGAACAGTCTGCAAACTGATGACACAGCCATGTACTA 638
                                                                                                                                                                                           TGGAAGCACAAATTATAATTCGGCTCTTATGTCCAGACTGAGCATCAGCAAGGACAACTC 578
                                                                                                                                                                                                                                  CCACTGGGTTCGCCAGCCTCCAGGAAAGGGTCTGGAGTGGCTAATAGTGATATGGAGTGA
                                                                                                                                                                                                                                                   ACACTGGGTTCGCCAGCCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGCTGG
                                                                                                                                                                                                                                                                                                           CTCACAGAGCCTGTCCATCACTTGCACTGTCTCTGGGTTTTCATTAACCAATTATGGTGT
                                                                                                                                                                                                                                                                                                                                                    CCCAAGCTGTGTCCTGTCCCAGGTGCACCTGAAGGAGACAGGACCTGGCCTGGTGGTGGCGCC 113
                                                                                   CTGTGCCAGTCGGGG---GGGTAACTACGGCTATGCTTTGGACTACTGGGGTCAAGGAAC
                                                                                                                CAAGAGCCAAGTCTTCTTAAAAATGAACAGTCTCCAAACTGATGACACAGCCATGTATTA
                                                                                                                                                                          TGGAAGCCCAAACTATAATCCAGCTCTCAAATCCAGACTGAGCATCAGCAAGGACAACCC
                                                                                                                                                                                                                                                                                                                                                                                CTCTGGCGGTGGCGGATCGCAGGTGCAGGTCAAGGACCTGGCCTGGTGGCGCCC
                           CTCAGTCACCGTCTCCTCA 714
                                                        CTGTGCCACAGGGGGTGAGGGCAGCGCGGGCTACAATTTTGCTTACTGGGGCCCCAGGGAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             quality sequence start: 3 quality sequence stop: 415.
                                                                                                                                                                                                                                                                                                                                                                                                             37.2%;
ilarity 83.1%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LLAM14015 row: c column: 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /db_xref="taxon:10090"
/clone="IMAGE:6475820"
/lab_host="MH108 (T1 phage-resistant)"
/clone_lib="NCI_CGAP_Co24"
/note="Organ: colon; Vector: pCMV-SPORT6; Site_1: NotI;
Site_2: Sall; Cloned unidirectionally. Primer: Oligo d
Average insert size 1.6 kb. Constructed by Life
Technologies. Note: this is a NCI_CGAP Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     mol_type="mRNA"
strain="FVB/N"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GI:22355954
                                                                                                                                                                                                                                                                                                                                                                                                          Score 265.4; | Pred. No. 3.5e | O; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                                                            3.5e-66;
                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 5;
                                                                                                                                                                                                                                                                                                                                                                                                             61;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gene
                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 970;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                             u
۲
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mus.
                                                                                   695
                                                         413
                                                                                                                353
                                                                                                                                                                        293
                                                                                                                                                                                                                                  233
                                                                                                                                                                                                                                                               518
                                                                                                                                                                                                                                                                                           173
                                                                                                                                                                                                                                                                                                                        458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 фŢ
                                                                                                                                          RESULT 9
BF579344
LOCUS
DEFINITION
                                                      ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CR047446/c
                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                     Ś
                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                             片
                                                                                                                                                                                                                                                                                                                                                                                                                                       á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Bource
                                                                                                                                                                                                                                                            646
                                                                                                                                                                                                                                                                                                                      586
                                                                                                                                                                                                                                                                                                                                                   147
                                                                                                                                                                                                                                                                                                                                                                                526
                                                                                                                                                                                                                                                                                                                                                                                                              207
                                                                                                                                                                                                                                                                                                                                                                                                                                           466
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            346
                                                                                                                                                                                                                                                                                           87
                                                                                                                                                                                                                                    27
```

RESULT

```
REFERENCE
AUTHORS
TITLE
JOURNAL
COMMENT
Bukaryota; Metazoa; Chordata; Cra
Mammalia; Eutheria; Rodentia; Sci
1 (bases 1 to 330)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Ma
Ungublished (1999)
Contact: Robert Strausberg, Ph.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CR047446 831 bp DNA linear GSS 05-JUL-2 Forward strand read from insert in 5'HPRT insertion targeting an Chromosome engineering clone MHPN40c19, genomic survey sequence.
                                                                                                                                                                                                                                                                                  602095631F1 NCI_CGAP_Co24 Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Submitted (20-FEB-2004) Sanger Centre, Hinxton, CB10 1SA, UK. http://www.sanger.ac.uk/MICER Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mammalia; Eutheria; Rodentia; Sciu 1 (bases 1 to 831)
Adams,D.J., Biggs,P.J., Cox,A.V., Jonkers,J., Smith,J., Plumb,R.W., Rogers,J. and Bradley,A.
Direct Submission
                                                                                                                                                                                                                                                                                                             BF579344
                                                                                                                                                          Mus musculus
                                                                                                                                                                               Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GSS; genome survey sequence; MICER.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CR047446.1 GI:49780504
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   h 36.8%;
Similarity 91.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GGTGGCGGATCGCAGGTGCAGGTGAAGGAGTCAGGACCTGGCCTGGTGGCGCCCTCACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AGTC 649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CAAGITTTCTTAAAAATGAACAGTCTCCAAACTGATGACACAGCCATGTACTACTGTGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CAAGTTTTCTTAAAAATGAACAGTCTGCAAACTGATGACACAGCCATGTACTACTGTGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GETGTCCTGTCCCAGGTGCAGCTGAAGGAGTCAGGACCTGACCTTGGTGGCGCCCTCACAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACAACCTATAATTCAGCTCTCAAATCCAGACTGAGCATCAGCAAGGACAACTCCAAGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACAAATTATAATTCGGCTCTTATGTCCAGACTGAGCATCAGCAAGGACAACTCCAAGAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GTTCGCCAGCCTCCAGGAAAGGGTCTGGAGTGGCTGGTAGTGATATGGAGTGATGGAAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GTTCGCCAGCCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGCTGGTGGAAGC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AGCCTGTCCATCACATGCACCGTCTCAGGGTTCTCATTAACCAGCTATGGTGTACACTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGCCTGTCCATCACTTGCACTGTCTCTGGGTTTTCATTAACCAATTATGGTGTACACTGG
                                                                                                                                                                                                                                                                                                                                                                                                                            AGAC 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /clone="MHPN40C17
/clone_lib="MHPN"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /organism="Mus musculus"
/mol_type="genomic DNA"
/db_xref="taxon:10090"
/clone="MHPN40c19"
                                                                                                                                                                                                                        GI:11653056
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 262.4; DB 9;
Pred. No. 2.5e-65;
                                                                                                                                                                                                                                                                                    930 bp mkw
Mus musculus
    Ph.D
                                                                                                            Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus.
                                              Mammalian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Davies,R.M., van der Weyden,L.,
Taylor,R.G., Nishijima,I., Yu,Y.,
                                                                                                                                                                                                                                                                                                                mRNA
                                                                                                                                                                                                                                                                                         A linear clone
                                              Gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length
                                              Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Cambridgeshire,
                                                                                                                                                                                                                                                                                         EST 12-DEC-2000
IMAGE: 4215751 5',
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GSS 05-JUL-2004
targeting and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       405
```

```
REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                 RESULT 10
CO567792
                                                                                                       SOURCE
ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FEATURES
                                                                                                                                               KEYWORDS
                                                                                                                                                                                                                               DEFINITION
                                                                                                                                                                VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
Matches 312; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     source
                                                                                                                                                                                                                                                                                                                                                   413
                                                                                                                                                                                                                                                                                                                                                                                           699
                                                                                                                                                                                                                                                                                                                                                                                                                                   356
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       639
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               296
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       579
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       519
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         56
                                                                                                                                                                                       792 bp
AGENCOURT 28626487 NIH MGC 249 K
IMAGE:7379450 5', mRNA sequence.
CO567792
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cDNA Library Preparation: Life Technologies, Inc. cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL) DNA Sequencing by: Incytte Genomics, Inc. Clone distribution: MGC clone distribution information can found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov column: 08 High quality sequence stop: 633.
NIH-MGC
                                                        Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
                                                                                                     Rattus norvegicus (Norway rat)
                                                                                                                                                              CO567792.1 GI:50380421
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Jeffrey E. Green,
                                            Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TGGAAGCACAAATTATAATTCGGCTCTTATGTCCAGACTGAGCATCAGCAAGGACAACTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACACTGGGTTCGCCAGCCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGCTGG
                                                                                                                                                                                                                                                                                                                                                                                       AGTCACCGTCTCCTCA 714
                                                                                                                                                                                                                                                                                                                                                                                                                                                      CTGTGCCAGTCGGGGGGGTAACTACGGCTATGCTTTGGACTACTGGGGTCAAGGAACCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CAAGAGCCAAGTTTTCTTAAAAATGAACAGTCTGCAAACTGATGACACAGCCATGTACTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TGGGAACACAAACTATAATTCAGTTCTCAAATCCAGACTGAGCATCAGCAAGGACAACTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTCACAGAGCCTGTCCATCACATGCACCGTCTCAGGATTCTCATTAACCAGCTATGGTAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CTCACAGAGCCTGTCCACTTGCACTGTCTCTGGGTTTTTCATTAACCAATTATGGTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CCCAAGCTGTGTCCTGTCCCAGGTGCAGCTGAAGGAGACAGGACCTGGCCTGGTGGCGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CAAGAGCCAAGTTTTCTTAAAAATGAATAGTCTCCAAACTGATGACACAGCCATATACTA
                     (bases 1 to 792)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
  http://mgc.nci.nih.gov/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /db_xref="taxon:10090"
/dlone="IMAGE:421575!"
/clone="IMAGE:421575!"
/lab host="DH10B (T1 phage-resistant)"
/clone_lib="NCI_CGAP_CO24"
/note="Organ: colon; Vector: pcMV-SPORT6; Site_1: NotI;
/site_2: Sall; Cloned unidirectionally. Primer: Oligo dT.
Average insert size 1.6 kb. Constructed by Life
Technologies. Note: this is a NCI_CGAP Library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /mol_type="mRNA
/strain="FVB/N"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 organism="Mus musculus"
/mol type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ocation/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        36.8%;
83.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .930
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         <u>,,</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 262.4; DB 2;
Pred. No. 2.6e-65;
0; Mismatches 61;
                                                                                                                                                                                                                         Rattus norvegicus cDNA clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3. D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 930;
                                                                                                                                                                                                                                                linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                EST 19-JUL-2004
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ω
~•
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       þe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       698
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     638
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         115
```

밁 Ş

Ş

RESULT 11

Ş 밁

밁

밁 Ś 밁 8 밁

δ

```
Ş
                                                                                                                                            밁
                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             source
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    146
                                                                                                                                                386
446
                                                                    704
                                                                                                                                                                                                                                                                                        326 ACCAAGTTTTCTTAAAAATGAACAGTCTGCAAACTGAAGACACAGCCATTTACTACTGTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     344 GCGGTGGCGGATCGCAGGTGCAGGTGAAGGAGTCAGGACCTGGCCTGGTGGCGCCCTCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             301;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    High quality sequence start: 15
High quality sequence stop: 703.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Drs. Josef Lazar & Howard
College of Wisconsin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           National Institutes of Health, Mammalian Unpublished (1999) Contact: Daniela S. Gerhard, Ph.D. Office of Cancer Genomics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Plate: LLAM15536
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      National Cancer Institute / NIH
Bldg. 31 Rm10A07 Bethesda, MD 20892
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CDNA Library Preparation: Open Biosystems
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can
                                             CCGTCTCCTCA 714
                                                                                                                                                                                                                                                                                                                                     GCCAAGTTTTCTTAAAAATGAACAGTCTGCAAACTGATGACACAGCCATGTACTACTGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                        ACACATATTATAATTCAGCTCTCAAATCCCCGACTGAGCATCAGCAGGGACACCTCCAAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCACAAATTATAATTCGGCTCTTATGTCCAGACTGAGCATCAGCAAGGACAACTCCAAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AGAGCCTGTCCATCACTTGCACTGTCTCTGGGTTTTCATTAACCAATTATGGTGTACACT
                                                                                                                                                                                             CCAGTCGGGGGGTAACTACGGCTATGCTTTGGACTACTGGGGTCAAGGAACCTCAGTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GGGTTCGCCAGCCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGCTGGTGGAA
CAGTCTCCTCA 456
                                                                                                                                                CCAGAGCACCGGGATACAGTGGTGACTACTTTGATTACTGGGGCCAAGGAGTCATGGTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGGTTCGCCAGCCTCCAGGAAAGGGTCTGGAGTGGATGGGAAGAATGAAGTATGATGGAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AGACCCTGTCCCTCACCTGCACTGTCTCTGGATTCTCATTAATGGACTACAGTGTACACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCTGTGTCCTGTCCCAGGTGCAGCTGAAGGAGTCAGGACCTGGTCTGGTGCAGCCCTCAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /mol type="manua"
/mol type="manua"
/db xref="taxon:10116"
/clone="IMAGE:7379450"
/lab host="PHIOB TonA"
/lab host="PHIOB TonA"
/clone=lib="NIH_MGC_249"
/clone="Torgan: spleen; Vector: pExpress-1; Site_1: EcoRV;
/note="Corgan: spleen; Vector: pExpress-1; Site_1: EcoRV;
/note="Torgan: spleen; Vector: pExpr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    organism="Rattus norvegicus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           36.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      row: f column:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 259; DB 7;
Pred. No. 2.5e-64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 7; Length 792;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Jacob,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    þe
                                                                                                                                                                                                                                                                                            385
                                                                                                                                                                                                                                                                                                                                                                    643
                                                                                                                                                                                                                                                                                                                                                                                                                                            325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    205
```

```
Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     VERSION
KEYWORDS
                                  δ
                                                                                       밁
                                                                                                                                δ
                                                                                                                                                                                 밁
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACCESSION
                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Bource
                                           524
                                                                                       214
                                                                                                                                     464
                                                                                                                                                                                 154
                                                                                                                                                                                                                 404 AGAGCCTGTCCACTTGCACTGTCTCTGGGTTTTCATTAACCAATTATGGTGTACACT 463
                                                                                                                                                                                                                                                                                                          344 GCGGTGGCGGATCGCAGGTGAAGGAGTCAGGACCTGGCCTGGTGGCGCCCTCAC
                                                                                                                                                                                                                                                                             94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AGENCOURT 28451299 NIH MGC_248 Rattus norvegicus cDNA clone
IMAGE:736659 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               High quality sequence start: 46
High quality sequence stop: 699.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov plate: LLAM15503 row: b column: 01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Drs. Josef Lazar & Howard
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Contact: Daniela S. Gerhard, Ph.D. Office of Cancer Genomics National Cancer Institute / NIH Bldg. 31 Rm10A07 Bethesda, MD 2085
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian
Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CO574382.1 GI:50387011
EST.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Rattus norvegicus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Rattus norvegicus (Norway rat)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      College of Wisconsin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CDNA Library Preparation: Open Biosystems
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC clone distribution information can be
                                                                                                               GGGTTCGCCAGCCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGCTGGTGGAA 523
                                                                                                                                                                                                                                                                             GCTGTGTCCCTGTCCCAGGTGCAGCTGAAGGAGTCAGGACCTGGCCCTTGTGCAGCCCTCAC 153
                                           GCACAAATTATAATTCGGCTCTTATGTCCAGACTGAGCATCAGCAAAGGACAACTCCAAGA 583
                                                                                                                                                                                 AGACCCTGTCCCTCACCTGCACTGTCTCTGGGTTCTCATTAACCAGCTATAATGTACACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (bases 1 to 793)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /clone="IMAGE:7366659"
/lab host="DHIOB TonA"
/clone_lib="NIH_MGC_248"
/clone_lib="NIH_MGC_248"
/note="Organ: spleen; Vector: pExpress-1; Site 1: EcoRV;
/site_2: NotI; RNA obtained from testis tissue of 8 wk old animal. Tissues were snap-frozen and kept at -80C before RNA extraction and purification (Tri-reagent method). cDNA was primed using oligo-dT primer:
5'-pGACTAGTTCTAGATCGCGACCGCCCCC(T)25-3' and cloned into the EcoRV/NotI sites of pExpress-1. Size-selection >1.25kb resulted in an average insert size of 1.7 kb. This is a primary library (normalized library is NIH MGC 249) and was constructed by Open Biosytems. Note: this is a NIH_MGC library"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /mol_type="mRNA"
/db_xref="taxon:10116"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 organism="Rattus norvegicus"
                                                                                                                                                                                                                                                                                                                                                                                           36.1%;
80.9%;
                                                                                                                                                                                                                                                                                                                                                                     Score 257.4; DB 7
Pred. No. 7.3e-64;
0; Mismatches 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MD 20892
                                                                                                                                                                                                                                                                                                                                                                       71;
                                                                                                                                                                                                                                                                                                                                                                                                                 7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Jacob, Medical
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Collection (MGC)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EST 19-JUL-2004
                                                                                                                                                                                                                                                                                                                                                                     ٥,
                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                 213
```

S

344 GCGGTGGCGGATCGCAGGTGAAGGAGTCAGGACCTGGCCTGGTGGCGCCTCAC 403

Query Match Best Local Similarity

35.4%;

Matches

305;

Conservative

0

Score 253; DB 7; Pred. No. 1.5e-62; 0; Mismatches 60

Indels

6

Gaps

```
REFERENCE
AUTHORS
TITLE
JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 12
CO558560
LOCUS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     á
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Bource
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   454
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                644 CCAGTCGGGGGGTAACTACGGCTATGCTTTGGACTACTGGGGTCAAGGAACCTCAGTCA 703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov
plate: LLAM15523 row: p column: 11
High quality sequence start: 23
High quality sequence stop: 708.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Contact: Daniela S. Gerhard, Ph.D. Office of Cancer Genomics
Office of Cancer Genomics
National Cancer Institute / NIH
Bldg. 31 Rm10A07 Bethesda, MD 20892
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Drs. Josef Lazar & Howard Jacob, Medical
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection (MGC)
Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CO558560 914 bp mRN
AGENCOURT 28542576 NIH MGC 248 Rattus
IMAGE: 7374685 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       College of Wisconsin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Rattus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Rattus norvegicus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    cDNA Library Preparation: Open Biosystems
cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Agencourt Bioscience Corporation
Clone distribution: MGC Clone distribution information can
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GCCAAGTTTTCTTAAAAATGAACAGTCTGCAAACTGATGACACACCAGCCATGTACTGTG 643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTGTCTCTTCA 464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CCGTCTCCTCA 714
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ACAGAAATGGCCCTACTACGGAGGGTTGGTTTGCTTACTGGGGCCAAGGCACTCTGGTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (bases 1 to 914)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               norvegicus (Norway rat)
                                                                                                                                                 /lab_host="DH10B TonA"
/clone lib="NIH MGC 248"
/clone lib="NIH MGC 248"
/note="Torgan: spieen; Vector: pExpress-1; Site_1: EcoRV;
/note="Torgan: spieen; Vector: pExpress-1; Site_1: EcoRV;
Site_2: Not1; RNA obtained from testis tissue of 8 wk old
animal. Tissues were snap-frozen and kept at -80C before
RNA extraction and purification (Tri-reagent method). cDNA
was primed using oligo-dT primer:
5'-pGACTAGTTCTAGATCGCGAGCGGCCGCCC(T) 25-3' and cloned into
                                          the EcoRV/NotI sites of pExpress-1. Size-selection >1.25kb resulted in an average insert size of 1.7 kb. This is a primary library (normalized library is NIH MGC 249) and the constructed by Open Biosytems. Note: this is a NIH_MGC via_constructed by Open Biosytems. Note:
                                                                                                                                                                                                                                                                                                                                                                      /mol_type="mRNA"
/db_xref="taxon:10116"
/clone="IMAGE:7374685"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                       organism="Rattus norvegicus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Chordata; Craniata; Vertebrata; Euteleostomi; Rodentia; Sciurognathi; Muridae; Murinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   norvegicus cDNA clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  e
d
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     393
```

밁 S 밁

B Ş

CGCTCGGAGGG

291 309 240 249 180 189

130

369

EST 13-SEP-2002

Mus.

эd

6,

Gaps

фŢ

398

```
RESULT 13
BF580610
LOCUS
                                                                                                                                                                                                                                                                                                                                                                 FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KEYWORDS
                                     Query Match
Best Local Similarity
                      Matches 304;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  524
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 464
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         704
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Unpublished (1999)
Contact: Robert Strausberg, Ph.D.
Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Jeffrey E. Green, M.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                       CDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can
found through the I.M.A.G.E. Consortium/LLNL at:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian Gene Collection
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostc
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;
1 (bases 1 to 883)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      mRNA sequence.
BF580610
BF580610.1 GI:11654322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BF580610 883 E 602093730F1 NCI_CGAP_Co24 Mus
                                                                                                                                                                                                                                                                                                                                                                                                                           http://image.llnl.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCAGTCGGGGGGTAACTACGGCTATGCTTTGGACTACTGGGGTCAAGGAACCTCAGTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GCCAAGTTTTCTTAAAAATGAACAGTCTGCAAACTGATGACACAGCCATGTACTACTGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGACCCTGTCCCTCACCTGCACTGTCTCTCGGTTTCTCACTAACCAGCTATGGTGTAAACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CAGTCTCCTCA 458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCGTCTCCTCA 714
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCCAAGTTTTCTTAAAAATGAACAGTCTGCAAACTGAAGACACAGCCATCTACCTCTGTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GCACAGATTACAATTCAGCTCTCAAATCCCGACTGAGCATCAGCAGGGACACTTCTAAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GCACAAATTATAATTCGGCTCTTATGTCCAGACTGAGCATCAGCAAGGACAACTCCAAGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGGTTCGCCAGCCTCCAGGAAAGGGTCTGGAGTGGAATGGGAACAATATGGAATGATGGAA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GGGTTCGCCAGCCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGCTGGTGGAA
                                                                                                                                                                                                                                                                                                                                                                                 late: LLAM9771 row: 1 column: 07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CCA-----GAGAATACTACAGTGGTAACTTTGATTACTGGGGCCAAGGAGTCATGGTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AGAGCCTGTCCATCACTTGCACTGTCTCTGGGTTTTCATTAACCAATTATGGTGTACACT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GCTGTGCTCTGTCCCAGGTGCAGCTGAAGGAGTCAGGACCTGGCCTGGTGCAGCCCTCAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 musculus (house mouse)
                      Conservative
                                                                                                                 /clone="IMAGE:4208022"
/lab_host="DH10B (T1 phage-resistant)"
/clone lib="NCI CGAP Co24"
/note="Organ: colon; Vector: pCMV-SPORT6; Site_1: NotI;
Site_2: Sall; Cloned unidirectionally. Primer: Oligo dT.
Average insert size 1.6 kb. Constructed by Life
Technologies. Note: this is a NCI_CGAP Library."
                                                                                                                                                                                                                                                                                /organism="Mus musculus"
/mol_type="mRNA"
/strain="FVB/N"
                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
                                                                                                                                                                                                                                                              db_xref="taxon:10090"
                                         35.1%;
                    ٥,
                                       Score 250.4; DB 2;
Pred. No. 8.4e-62;
                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  883 bp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                op mRNA linear EST 12-DEC-2000 musculus cDNA clone IMAGE:4208022 5',
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Craniata; Vertebrata; Euteleostomi;
                      21;
                                                           Length 883;
                      Indels
                    11;
                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  be
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               463
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             333
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    583
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        213
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  447
                    ű
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE
AUTHORS
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 14
BU522894
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ś
                    S
                                                                                                                                            ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                        FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACCESSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pocus
                                                             Best Loc
Matches
                                                                                Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                JOURNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         310
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             370
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    190
339 CTCTGGCGGTGGCGGATCGCAGGTGCAGGTGCAAGGAGTCAGGACCTGGCCTGGTGGCGCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              241
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61 ATAACCTGCAAGGCCAGTCAGAGTGTGAGTAATGATGTGGCTTGGTACCAACAGAAGCCA 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               72
                                                                305;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          912 bp
AGENCOURT 10158089 NCI CGAP CO24
IMAGE:6529489 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                           found through the I.M.A.G.E. Consortium/LLNL at: http://image.llnl.gov Plate: LLAM14129 row: 1 column: 01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Contact: Robert Strausberg, Ph.D. Email: cgapbs-r@mail.nih.gov
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 (bases 1 to 912)
NIH-MGC http://mgc.nci.nih.gov/.
National Institutes of Health, Mammalian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Tissue Procurement: The Cepko Laboratory
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Unpublished (1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mus musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BU522894.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BU522894
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CDNA Library Preparation: Life Technologies, Inc. CDNA Library Arrayed by: The I.M.A.G.E. Consortium LLNL) DNA Sequencing by Agencourt Bioscience Corporation Clone distribution: MGC clone distribution information can
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GAAGACCTGGCAGTTTATTTCTGTCAGCAGGATTATAGCT------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GGGCAGTCTCCGAAACTGCTGATATACTCTGCATCCAATCGCTACACTGGAGTCCCTGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GGCACCAAGCTGGAAATCAAACGGGCTGATGCTGCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GGGACCAAGCTGGAAATAAAAGGTGGAGGCGGTTCA 327
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GAAGACCTGGCAGTTTATTTCTGTCAGCAGGATTATAGCTCTCCGGACGTTCGGTGGA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CGCTTCACTGGCAGTGGACATGGGACGGATTTCACTTTCACCATCAGCACTGTGCAGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CGCTTCACTGGCAGTGGATATGGGACGGATTTCACTTTCACCATCAGCACTGTGCAGGCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GGGCAGTCTCCTAAACTGCTGATATACTATGCATCCAATCGCTATACTGGAGTCCCTGAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATAACCTGCAAGGCCAGTCAGAGTGTGAGTAATGATGTAGC-TGGTACCAACAGAAGTCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AGTATTGTGATGACCCAGACTCCCAAATTCCTGCTTGTATCAGCAGGAGACAGGGTTACC
                                                                                                                                                                                                                                                                                                                                                                                                                           quality sequence stop: 653.
                                                                Conservative
                                                                                                                                                        /clone="IMAGE:6529489"
/lab host="DH10B (T1 phage-resistant)"
/clone lib="NCI CGAP CO24"
/note="Organ: colon; Vector: pCMV-SPORT6; Site_1: NotI;
Site_2: Sall; Cloned unidirectionally. Primer: Oligo dnaverage insert size 1.6 kb. Constructed by Life
Technologies. Note: this is a NCI_CGAP Library."
                                                                                                                                                                                                                                                                                                     db_xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                            strain="FVB/N"
                                                                                                                                                                                                                                                                                                                                          mol_type="mRNA"
                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                 organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                        .912
                                                                                35.0%;
                                                             Score 250; DB Pred. No. 1.1e 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mus
                                                                                DB 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         mRNA linear EST
                                                                  65;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 405
                                                                                                 Length 912;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gene Collection (MGC)
                                                                  Indels
```

밁 Ş 밁 Ş В Ś

Ś

밁

1,

```
JOURNAL
MEDLINE
PUBMED
COMMENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE
AUTHORS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 15
BY733751
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ACCESSION
VERSION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ś
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOURCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KEYWORDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DEFINITION
                                                                                                              TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM
                                                     Mammialia, Eutheria; Rodentia; Craniata; Vertebrata; Euteleostomi; Mammialia, Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus. (CE 1 (bases 1 to 664)

RS Okażaki, Y., Puruno, M., Kasukawa, T., Adachi, J., Bono, H., Kondo, S., Nikajdo, I., Osato, N., Saito, R., Suzuki, H., Yamanaka, I., Kiyosawa, H., Yagi, K., Tomaru, Y., Hasegawa, Y., Nogami, A., Schinbach, C., Gojobori, T., Baldarelli, R., Hill, D.P., Bult, C., Humė, D.A., Ouackenbush, J., Schriml, L.M., Kanapin, A., Matsuda, H., Batalov, S., Beisel, K.W., Blake, J.A., Bradt, D., Brusic, V., Chothia, C., Corbani, L.E., Cousins, S., Dalla, E., Dragani, T.A., Fletcher, C.F., Forrest, A., Frazer, K.S., Gaasterland, T., Garimond, S., Hirokawa, N., Jackeon, I.J., Jarvis, E.D., Kanai, A., Kurochia, C., Codzik, A., Gough, J., Grimmond, S., Gustincich, S., Hirokawa, N., Jackeon, I.J., Jarvis, E.D., Kanai, A., Kurochia, I.V., Lee, Y., Lenhard, B., Lyons, P.A., Maglott, D.R., Maltais, L., Marchionni, L., McKenzie, L., Miki, H., Nagashima, T., Numata, K., Okido, T., Pavan, W.J., Pertea, G., Pesole, G., Petrovsky, N., Pillai, R., Pontius, J.U., Qi, D., Ramachandran, S., Ravasi, T., Reed, J.C., Reed, D.J., Reid, J., Ring, B.Z., Ringwald, M., Saltana, R., Takenaka, Y., Taylor, M.S., Teasdale, R.D., Tomita, M., Verardo, R., Wagner, L., Wahlestedt, C., Wang, Y., Watanabe, Y., Watanabe, Y., Vang, L., Yang, L., Carninci, P., Yang, L., Yang, L., Sato, K., Shiraki, T., Waki, K., Kawai, J., Aizawa, K., Arakawa, T., Konno, H., Nakamura, M., Yang, I., Yang, L., Carninci, P., Sakazume, N., Sato, K., Shiraki, T., Waki, K., Kawai, J., Aizawa, K., Anakawa, T., Fohmer, A., Carninci, P., Analysis of the mouse transcriptome based on functional annotation of 60,770 full-length cDNAs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             639
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            389
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    699
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      579
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               519
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      459
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          BY733751
BY733751 RIKEN full-length enriched, adult male accessory axillary lymph node Mus musculus cDNA clone G630076H03 5', mRNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mus musculus
Contact: Yoshihide Hayashizaki
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AGTCACCGTCTCCTCA 714
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACACTGGGTTCGCCAGCCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGCTGG 518
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CTCACAGAGCCTGTCCATCACTTGCACTGTCTCTGGGTTTTCATTAACCAATTATGGTGT 458
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GÓTCACCGTCTCCTCA 404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTGTGCCAGTCGGGGGGGAACTACGGCTATGCTTTGGACTACTGGGGTCAAGGAACCTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CAAGAGCCAAGTTTTCTTTAAAATGAACAGTCTGCAAGGTGATGACACAGCCATATATTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CAAGAGCCAAGTTTTCTTAAAAATGAACAGTCTGCAAACTGATGACACAGCCATGTACTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TGGAAGCACAGACTATAATGGAGATTTCAAATCCAGACTGAACATCAGCAAGGACAATTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TGGAAGCACAAATTATAATTCGGCTCTTATGTCCAGACTGAGCATCAGCAAGGACAACTC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACACTGGGTTCGCCAGTCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTGATATGGAGTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTCACAGAGCCTGTCCATCACCTGCACAGTCTCTAATTTCTCATTAACTACCTATGGTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CCCAAGCTGTGTCCTATCCCAGGTGCAGCTGAAGCAGTCAGGTCCTGGCCTAGTGCAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           musculus (house mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 388
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             698
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      638
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             578
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          334
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   274
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   154
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         94
                                                                                                         Ś
                                                                                                                                                                                             Ś
                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                       Ś
                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                             S
                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                     S
                                                                 밁
                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FEATURES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches 311;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             source
                                                                 310
                                                                                                                                                                                                  519
                                                                                                                                                                                                                                                                                                                                                                                  399
                                                                                                                                                        250
                                                                                                                                                                                                                                               190
                                                                                                                                                                                                                                                                                           459
                                                                                                                                                                                                                                                                                                                                     130
                                                                                                                                                                                                                                                                                                                                                                                                                              70
```

```
Query Match
Best Local Similarity
639 CTGTGCCAGTCGGGGGGGTAACTACGGCTATG---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Email: genome-res@gsc.riken.jp, URL:http://genome.gsc.riken.jp/Adachi,J., Aizawa,K., Akimura,T., Arakawa,T., Carninci,P., Pukuda,S., Hashizume,W., Hayashida,K., Hirozana,T., Hori,F., Imotani,K., Ishii,Y., Itoh,M., Kagawa,I., Kawai,J., Kojima,Y., Imotani,K., Ishii,Y., Itoh,M., Kagawa,I., Kawai,J., Kojima,Y., Kondo,S., Konno,H., Koya,S., Miyazaki,A., Wirata,M., Nakamura,M., Nomura,K., Numazaki,R., Ohno,M., Ohsato,N., Saito,R., Sakazume,N., Sano,H., Sasaki,D., Sato,K., Shibata,K., Shiraki,T., Tagami,M., Sano,H., Sasaki,D., Sato,K., Shibata,K., Shiraki,T., Tagami,M., Shiraki,Y., Waki,K., Watahiki,A., Muramatsu,M. and Hayashizaki,Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          encyclopedia: real-time sequence clustering for construction of a nonredundant cDNA library. Genome Res. 11 (2), 281-289 (2001) cDNA library was prepared and sequenced in Mouse Genome Encyclopedia Project of Genome Exploration Research Group in Riken Genomic Sciences Center and Genome Science Laboratory in RIKEN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Computational Analysis of Full-Length Mouse cDNAs Compared with Human Genome Sequences Mamm. Genome. 12, 673-677 (2001)

Normalization and subtraction of cap-trapper-selected cDNAs to prepare full-length cDNA libraries for rapid discovery of new genes. Genome Res. 10 (10), 1617-1630 (2000)

RIKEN integrated sequence analysis (RISA) system-384-format sequencing pipeline with 384 multicapillary sequencer. Genome Res. 10 (11), 1757-1771 (2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Laboratory for Genome Exploration Research Group, RIKEN Genomic Sciences Center(GSC), Yokohama Institute
The Institute of Physical and Chemical Research (RIKEN)
1-7-22 Suehiro-cho, Tsurumi-ku, Yokohama, Kanagawa 230-0045, Japan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   prepare mouse tissues.
Please visit our web site (http://genome.gsc.riken.go.jp) for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Direct Submission
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Tel: 81-45-503-9222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         further details.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Division of Experimental Animal Research in Riken contributed to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Computer-based methods for the mouse full-length cDNA
                                                                                                                                                       CAAGAGCCAAGTTTTCTTAAAAATGAACAGTCTGCAAACTGATGACACACGCCATGTACTA 638
                                                                                                                                                                                                                                                                                                                                                                                                                                       ACACTGGGTTCGCCAGCCTCCAGGAAAGGGTCTGGAGTGGCTGGGAGTAATATGGGCTGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CTCACAGAGCCTGTCCATAACCTGCACAGTCTCTGGTTTTCTCATTAACTAGCTATGGTGT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CTCACAGAGCCTGTCCATCACTTGCACTGTCTCTGGGTTTTTCATTAACCAATTATGGTGT 458
                                                                                                                                                                                                                                                          TGGAAGCACAGACTACAATGCAGCTTTCATGTCCAGACTGAGCATCACCAGGGACAACTC
                                                                                                                                                                                                                                                                                                                         TGGAAGCACAAATTATAATTCGGCTCTTATGTCCAGACTGAGCATCAGCAAGGACAACTC
                                                                                                                                                                                                                                                                                                                                                                                               ACACTGGGTTCGCCAGTCTCCAGGAAAGGGTCTGGAAGTGGCTGGGAGTGATGTGGAGAGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CCCAAGCTGTGTCCTATCCCAGGTGCAGCTGAAGCAGTCAGGACCTGGCCTAGTGCAGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CTCTGGCGGTGGCGGATCGCAGGTGCAGGTGAAGGAGTCAGGACCTGGCCTGGTGGCGCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             81-45-503-9216
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /tissue_type="accessory axillary lymph node"
/dev stage="adult"
/clone_lib="RIKEN full-length enriched, adult
accessory axillary lymph node"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /sex="male"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /mol_type="mRNA"
/strain="C57BL/6J"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              clone="G630076H03"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       db xref="taxon:10090"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              organism="Mus musculus"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             34.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 247; DB 6;
Pred. No. 7.7e-61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               65
'-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                        -CTTTGGACTACTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Res
                                                                                                                                                                                                                                                                                                                         578
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         398
                                            683
                                                                                                              369
                                                                                                                                                                                                                                                                                                                                                                                               249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     518
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           189
```